CLASS 254, IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FORCE

SECTION I - CLASS DEFINITION

This class includes implements or apparatus for applying a pushing or pulling force directly to either (a) an object to be moved, or (b) a generally stationary object upon which pressure or tension is to be exerted. It comprises jacks (including lifting jacks, floor jacks, and analogous implements), extracting apparatus (including stump pullers and nail extractors), tensioning apparatus (including belt, carpet and wire stretchers), hoist trucks, and cable-type load hauling or hoisting apparatus. Also included in this class is the subcombination of a cable guide which (1) is a component of, or used in combination with, an implement or an apparatus of this class, and (2) is intended to guide a cable which is directly connected to either the object or an object-supporting or -engaging member.

This class does not include the power-applying elements of machines, such as pump or presses, nor the adjusting elements of articles such as tables and chairs. It may, however, include supports of general application not elsewhere classifiable when they comprise means for hoisting the load-carrying portion of the support.

Implements for performing compressing operations upon material, e.g., clamps and bundling devices, are excluded, also devices for merely grasping or engaging with something to be moved.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

Pushing or pulling implements of the jack or crowbar type, including those having special engaging features which engage between spring elements only, will be classified in Class 254. Those implements which engage between a spring and other structure to move or guide the spring into assembled or disassembled position will be classified in Class 29, subclasses 700+.

Patents that disclose a general use and state the implement can be used on an engine valve spring whether they coact with other structure for assembly or disassembly will be grouped as an art collection in Class 29, subclasses 215+.

Patents to an implement for spreading elements of a leaf spring are classified in Class 81, subclass 3.7.

SECTION III - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 700+ for pushing and pulling implements specially designed for assembling and disassembling purposes.

40, Card, Picture, or Sign Exhibiting, subclasses 349+ for a copyholder including means to elevate a platen to move copy supported by the platen relative to a line guide.

81, Tools, appropriate subclasses for a hand manipulatable tool for exerting a push or pull, but having no force multiplier or energy transducer to develop the pushing or pulling force. See particularly subclass 9.4 for a tool having means for pulling an insulating sheath from a wire, subclasses 300+ for pliers, subclass 485 for spreaders, subclass 486 for a resilient article tensioner or compressor, and subclass 487 for a tool having clamping jaws for gripping an article to be pulled.

173, Tool Driving or Impacting, subclasses 141+ and see the search notes therein for an advance causing or controlling means for a tool driving or impacting means.

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclasses 203+ for a stationary lift for a roadway vehicle which elevates the entire vehicle to a significantly higher level where it is inspected or repaired and appropriate subclasses for an elevator for lifting a load from a charging level to a significantly higher discharge level.

249, Static Molds, subclasses 205+ for pushing and pulling mold adjuncts.

252, Compositions, appropriate subclasses for fluids for hydraulic jacks or for other hydraulic devices.

SUBCLASSES

1 MISCELLANEOUS:
This subclass is indented under the class definition. Pushing and pulling implement not provided for under more specific titles.

SEE OR SEARCH CLASS:

81, Tools, subclasses 3.07+ for a receptacle closure removing tool for tools

combined with a pushing or pulling means.

2 HOISTING TRUCK:

This subclass is indented under the class definition. Wheeled hoists comprising a truck platform or equivalent load support and mechanism for raising and lowering the load support. Those in which the load support is raised or lowered by mere adjustment of the wheels, as by the movement of legs or levers on which the wheels are mounted, are excluded, also those having means for elevating one part of the vehicle body relative to another for the purpose of dumping or leveling.

(1) Note. Vehicles for transporting the load while it is suspended from a hoisting means are classified, according to the hoisting structure, either in appropriate structural subclasses elsewhere in this class or in Class 212, Traversing Hoists.

(2) Note. Wheeled hoists classifiable in this class and falling in this group on disclosure have been placed here whether the wheels are claimed or not.

(3) Note. See search notes below for wheeled structures in which a raising or lowering is obtained by mere adjustment of the wheels relative to the vehicle frame or other supported structure.

SEE OR SEARCH CLASS:

16, Miscellaneous Hardware, subclass 32 for wheeled structures in which a raising or lowering is obtained by mere adjustment of the wheels relative to the vehicle frame or other supported structure.

104, Railways, subclass 263 for wheeled structures in which a raising or lowering is obtained by mere adjustment of the wheels relative to the vehicle frame or other supported structure.

105, Railway Rolling Stock, subclass 73 for wheeled structures in which a raising or lowering is obtained by mere adjustment of the wheels relative to the vehicle frame or other supported structure; subclasses 261.1+ for tilting body railway cars.

182, Fire Escape, Ladder, or Scaffold, subclasses 63.1+ for a wheel-mounted scaffold, ladder or escape with erection means.

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclasses 222+ for a fork lift truck and subclasses 240+ for a transportable elevator.

212, Traversing Hoists, appropriate subclasses for overhead traveling hoists.

280, Land Vehicles, subclasses 43+ for wheeled vehicles in which a raising or lowering of the vehicle body is obtained by mere vertical adjustment of the wheels relative to the running gear.

298, Land Vehicles: Dumping, appropriate subclasses, particularly subclasses 17+ for loading-dumping vehicles.

414, Material or Article Handling, subclasses 540+; and 298, Land Vehicles, Dumping, subclass 11 for vehicles having elevators to load or unload them.

3 Tilting load support:

This subclass is indented under subclass 2. Hoisting truck in which the raising movement varies the inclination of the load-supporting surface, generally bringing it toward a horizontal position.

SEE OR SEARCH CLASS:

414, Material or Article Handling, subclasses 469+ for a self-loading or unloading vehicle having a load-receiving portion which is pivotable relative to the horizontal.

4 Cable hoist:

This subclass is indented under subclass 2. Hoisting truck in which the load support is attached to and hoisted by cables passing over drums or pulleys.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclasses 89.2+ for a drum and cable used to reciprocate or oscillate one component of an apparatus relative to another component of the apparatus.

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclasses 240+ for a transportable elevator.

5 Inclined plane or wedge:
This subclass is indented under subclass 2. Hoisting truck in which the load support is raised by the action of wedges or inclined planes.

6 Rack and pinion or segment:
This subclass is indented under subclass 2. Hoisting truck in which the load support is raised by rack and pinion or rack and toothed segment mechanism.

7 Screw:
This subclass is indented under subclass 2. Hoisting truck in which the load support is raised directly by one or more screws.

SEE OR SEARCH THIS CLASS, SUBCLASS:
99, for wheeled screw hoists in which the load is suspended from the screw or screws.

8 Single throw lever:
This subclass is indented under subclass 2. Hoisting truck in which the load support is raised directly by lever mechanism, the movement of the lever or levers being limited to a single throw.

(1) Note. Those trucks are excluded in which the truck wheels are mounted upon swinging legs or levers, by the mere swinging movement of which, relative to the vehicle frame, the frame or platform is raised.

9 Toggle:
This subclass is indented under subclass 8. Hoisting truck in which the load support is raised by means of single throw toggle levers.

10 Parallelogram bars:
This subclass is indented under subclass 8. Hoisting truck in which the load support is raised by the movement of links or bars arranged in the form of a parallelogram.

10.5 METALLIC SPRING STRETCHER AND/OR COMPRESSOR, (E.G., LEAF, HELICAL OR COIL SPRINGS):
This subclass is indented under the class definition. Device , the claimed structure of which functions as disclosed to engage an exert compressive, torsion or tensile forces on articles made of metal and usually known as “springs”.

SEE OR SEARCH CLASS:
29, Metal Working, subclasses 213.1+ for engine valve spring compressors, and subclasses 225+ for spring appliers and removers; and see the class definition of this class (254) for a statement of the line between Classes 29 and 254.
81, Tools, subclass 3.7 for a tool for spreading portions of a leaf spring, subclass 485 for other hand manipulated spreading tools, and subclass 486 for a hand manipulative tool for placing a resilient article under tension or compression.

11 FLOOR JACK TYPE:
This subclass is indented under the class definition. Implement used in laying flooring, siding or the like to force the boards to proper position.

SEE OR SEARCH CLASS:
269, Work Holders, appropriate subclasses. Class 269 is the residual locus for patents to a device for clamping, supporting and/or holding an article (or articles) in position to be operated on or treated. See notes thereunder for other related loci.

12 Rack and pinion or segment:
This subclass is indented under subclass 11. Implement of the floor jack type in which the board-forcing member is provided with a rack with which an actuating pinion or rack segment is in constant engagement.

13 Screw:
This subclass is indented under subclass 11. Implement of the floor jack type in which the board-forcing member is provided with a screw by means of which it is caused to travel.

14 Step-by-step traveling member:
This subclass is indented under subclass 11. Implement of the floor jack type not classifiable in the preceding subclasses in which the board-forcing member is caused to travel in a step-by-step movement by reciprocating engaging means.

15 Single throw lever and bar:
This subclass is indented under subclass 11. Implement of the floor jack type in which the board-forcing member is a lever-actuated bar, the entire travel of the bar being produced by a single throw of the lever.

16 Sliding bar:
This subclass is indented under subclass 15. Implement of the floor jack type in which the board-forcing member is a bar actuated by a single throw lever and sliding on some supporting portion of the jack.

SEE OR SEARCH THIS CLASS, SUBCLASS:
12, for floor jacks in which a rack bar is actuated by a single throw lever provided with a gear segment.

17 Single throw lever:
This subclass is indented under subclass 11. Implement of the floor jack type in which the actuating lever or a part rigid therewith directly engages the board, the movement under load being limited to a single throw of the lever.

18 NAIL EXTRACTOR TYPE:
This subclass is indented under the class definition. Implement especially designed for pulling nails, spikes, tacks and the like.

SEE OR SEARCH CLASS:
12, Boot and Shoe Making, subclass 16 for machines for pulling out the lasting tacks used for temporarily securing the upper of a shoe to the sole or insole.
29, Metal Working, subclasses 700+ for analogous structures.
112, Sewing, subclass 30 for shoe sole sewing machines including tack-pulling devices.
227, Elongated-Member-Driving Apparatus, subclass 63 for combined apparatus for applying and withdrawing a member, e.g., nail.

19 Hammer and anvil:
This subclass is indented under subclass 18. Implement of the nail extractor type including a hammer device for forcing the jaw or nipper into engagement with the nail or the like.

SEE OR SEARCH CLASS:
81, Tools, subclasses 463+; and see the notes thereto for other impact tools.

20 Screw:
This subclass is indented under subclass 18. Implement of the nail extractor type including screw and nut mechanism for moving the nail-engaging member to extract the nail.

SEE OR SEARCH THIS CLASS, SUBCLASS:
100, and see the search notes thereunder.
231+, for implement or apparatus for extracting stumps or poles including a screw drive for moving the stump-engaging member.

21 Single throw lever:
This subclass is indented under subclass 18. Implement of the nail extractor type including an operating lever, the entire pulling movement of the implement being produced by a single throw of the lever.

22 Lever and pivoted jaw grip:
This subclass is indented under subclass 21. Nail extractor of the single throw lever type adapted to engage the nail between the pulling lever and a jaw pivoted thereto.

SEE OR SEARCH THIS CLASS, SUBCLASS:
19, for nail extractor having a jaw and hammer.
131, for pushing and pulling implements, using a single throw lever.

23 Multiple jaw grip:
This subclass is indented under subclass 21. Nail extractor of the single throw lever type including a plurality of nail-gripping jaws movable relative to the lever.

24 Cam and wedge actuated:
This subclass is indented under subclass 23. Nail extractor of the single throw lever type including a plurality of nail-gripping jaws movable relative to the lever and actuated to grip the nail by wedge or cam action.

25 Claw bar:
This subclass is indented under subclass 21. Nail extractor of the single throw lever type in which the nail-engaging means is merely a claw fixed to or forming part of the lever.

26 Hammer:
This subclass is indented under subclass 25. Claw bar nail extractor combined with conventional hammer structures.

27 Pivoted fulcrum member:
This subclass is indented under subclass 25. Claw bar nail extractor provided with a fulcrum member pivotally connected to the lever or bar.

SEE OR SEARCH THIS CLASS, SUBCLASS:
36+, for pinch bar car pushers.

28 STAPLE PULLER:
This subclass is indented under the class definition. Implement especially designed for pulling staples.

SEE OR SEARCH CLASS:
227, Elongated-Member-Driving Apparatus, subclass 63 for combined apparatus for applying and withdrawing a member, e.g., staple.

28.5 THILL-COUPLING JACK:
This subclass is indented under the class definition. Device for forcing thill irons into axle clips against resilient antirattling devices or for forcing antirattlers into their positions in thill couplings.

29 PIPE OR ROD JACK:
This subclass is indented under the class definition. Jack especially designed for driving or pulling pipes, pump rods, piles, or the like, other than by impact.

SEE OR SEARCH THIS CLASS, SUBCLASS:
43, and 44, for some analogous structures for shifting rails longitudinally.

SEE OR SEARCH CLASS:
29, Metal Working, subclass 237 for apparatus for assembling or disassembling couplings and conduits.
173, Tool Driving or Impacting, subclasses 141+, and see the search notes therein for an advance causing or controlling means in combination with a tool-driving or-impacting device.
249, Static Molds, subclass 213 for tie rods or wires having a force multiplying component permanently attached thereto or remaining with the rods or wires when they are in use with a static mold.
405, Hydraulic and Earth Engineering, subclass 184 for methods and apparatus for advancing a length of pipe through an earth formation; and subclasses 232+ for impact devices and other means for forcing a pile into the earth when the structure of the pile is involved.

30 Lifter:
This subclass is indented under subclass 29. Jack for raising pipes, rods, piles, and the like.

(1) Note. Jacks of more general application but provided with grapples for pulling stumps or the like are classified under the structural subclasses elsewhere in this class.

SEE OR SEARCH THIS CLASS, SUBCLASS:
18+, for nail extractors.

31 Reciprocating clutch:
This subclass is indented under subclass 30. Pipe or rod lifters comprising clutch means for engaging with the pipe, rod, or the like, and mechanism for reciprocating said clutch means.

SEE OR SEARCH THIS CLASS, SUBCLASS:
106+, for analogous structures.

SEE OR SEARCH CLASS:

173, Tool Driving or Impacting, subclasses 53+ for a tool drive in which a tool is reciprocated by tool shaft gripping means which release or yield to permit advance.

188, Brakes, particularly subclass 67 for a brake mechanically connected to a relatively stationary structure and which holds a pipe or rod at various locations along the pipe's or rod's length for short, quick linear assembly or disassembly during a work or manufacturing operation or preparatory to a working operation done by the pipe, rod or a pipe supported tool.

294, Handling: Hand and Hoist-Line Implements, subclasses 86.4+ for pipe-lifting grips.

32 AXLE LUBRICATING JACK:

This subclass is indented under the class definition. Implement for use in raising vehicle wheels or axles for the purpose of lubricating the axle and including structure relating especially to such use, such as oiling devices, wheel rests, wrenches or means for removing the wheel.

SEE OR SEARCH CLASS:

81, Tools, subclass 2 for the combination of wrench and oiler only.

33 CAR JOURNAL BOX LIFTING:

This subclass is indented under the class definition. Lifting implement and support including structure especially designed for use in lifting journal boxes of cars.

34 Suspended lifter:

This subclass is indented under subclass 33. Car journal box lifting implement including means for suspending the load from the wheel or axle; includes some jacks which lift the journal box by rotation of the car wheel.

35 CAR PUSHER TYPE:

This subclass is indented under the class definition. Pushing implement designed especially for moving vehicles and operating between the vehicle and a rail or other portion of the road surface.

(1) Note. This subclass does not include apparatus forming a permanent part of the vehicle structure, whether serving as the usual or an auxiliary propelling means, nor propelling devices comprising traction wheels engaging a road surface.

36 Pinch bar:

This subclass is indented under subclass 35. Car pusher for the type commonly known as “pinch bars”, comprising a lever operating between a wheel and the road surface.

37 Rail clamping:

This subclass is indented under subclass 36. Pinch bar type car pushers including movable jaws for clamping the rail.

38 Pivoted wheel engaging member:

This subclass is indented under subclass 36. Pinch bar type car pushers comprising a pivoted member mounted upon or actuated by the power lever to engage and move the vehicle wheel.

39 DOOR BRACE:

This subclass is indented under the class definition. Prop or brace for forcing a door into tightly closed position or holding it closed.

SEE OR SEARCH CLASS:

292, Closure Fasteners, subclass 338 for braces holding closures in adjusted positions.

40 PRINTER'S QUOIN:

This subclass is indented under the class definition. Device for locking up or fastening type in chases or galleys.

SEE OR SEARCH CLASS:

101, Printing, subclass 394 for quoins, combined with special chase structure; and subclass 368 for register hooks and similar adjustable clamping devices for printing surfaces.

276, Typesetting, subclasses 40+ for similar devices involving combination with galleys or of special adaptation to galleys.

41 Screw:
This subclass is indented under subclass 40. Printer's quoin expanded directly by screw mechanism.

42 Wedge:
This subclass is indented under subclass 40. Printer's quoin in which the forcing members are wedges.

43 RAIL OR TIE SHIFTER:
This subclass is indented under the class definition. Implement for moving railway ties or rails laterally without lifting them.

SEE OR SEARCH CLASS:
- 33, Geometrical Instruments, subclass 651.1 for track gages not including means for forcing the rails laterally.
- 72, Metal Deforming, subclasses 212+ and 389+ for a three-point bending jack.
- 104, Railways, subclass 2 for track-laying machines for performing other operations in addition to shifting the track.

44 Single throw lever:
This subclass is indented under subclass 43. Rail or tie shifters in which the shifting element consists of, or is actuated by, a lever having a single throw.

45 VEHICLE BODY LIFTERS:
This subclass is indented under the class definition. Apparatus especially designed for lifting hay racks, wagon boxes, car bodies, and the like, from the running gear or trucks.

SEE OR SEARCH CLASS:
- 414, Material or Article Handling, subclasses 383+ for a load-transporting-type vehicle and the external means which cooperates in the loading or unloading of the vehicle and wherein the means is one which cooperates with the motion of the vehicle to reorient the load body, relative to the wheels, into a load-releasing attitude; and subclass 386 for another such vehicle and means, but wherein the means comprises a driven device for engaging and moving a portable load body relative to the remainder of the vehicle.

46 Lever and drum:
This subclass is indented under subclass 45. Vehicle body lifters in which the body is lifted by a lever or levers actuated by a cable and drum.

47 Cable hoist:
This subclass is indented under subclass 45. Vehicle body lifters in which the bodies are supported and hoisted directly by cables passing over drums or pulleys.

SEE OR SEARCH THIS CLASS, SUBCLASS:
- 266+, for apparatus for hauling or hoisting a load including a rotatably driven drum and cable.

SEE OR SEARCH CLASS:
- 74, Machine Element or Mechanism, subclasses 89.2+ for a drum and cable used to reciprocate or oscillate one component of an apparatus relative to another component of the apparatus.
- 226, Advancing Material of Indeterminate Length, appropriate subclasses for methods of, and apparatus for, feeding material without utilizing the leading or trailing ends to effect movement of the materials.

48 Vehicle attached drum:
This subclass is indented under subclass 47. Cable hoist for vehicle bodies in which the cable-actuating drum is attached to some part of the vehicle, generally the vehicle body.

49 Swinging side bar:
This subclass is indented under subclass 45. Vehicle body lifter comprising pivoted side bars, between which the running gears move and by which the body is lifted.

50 Single fixed pivot:
This subclass is indented under subclass 49. Vehicle body lifter of the swinging side bar type in which the side bars tilt about a single fixed pivot.

50.1 RESILIENT TIRE-CASING SPREADERS: This subclass is indented under the class definition. Apparatus comprising means for engaging and applying force either to spread apart or to press together the beads or side walls of resilient tire casings.

(1) Note. The spreading apart of the beads is usually disclosed as opening the interior of the casing for inspection, while the pressing together of the side walls is usually disclosed as opening up surface defects in the tread portion of the casing.

(2) Note. The "means for engaging and applying force" referred to in the definition is to be construed as excluding devices which merely hold the tire casing in deformed position. See Class 81, Tools, subclass 15.3 for such devices. Tire spread holders which are provided with means adapting the device to use also as a spreader are provided for in this or the indented subclasses.

SEE OR SEARCH CLASS:

81, Tools, subclasses 15.2+ for resilient tire repair tools in general, particularly subclass 15.3 (see (1) Note), and subclass 485 for hand manipulative tools for spreading portions of an article apart.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 394.1+ for casing spreaders in combination with tire-building apparatus.

157, Wheelwright Machines, subclasses 1.17+ for tire spreaders used in applying tire casings to wheels, e.g., (a) devices which spread tire casings while the casing is on a wheel, (b) spreaders combined with means to apply a casing to, or remove it from, a wheel, or (c) spreaders convertible to use as tire-casing compressors used in applying the casing to a wheel.

425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 48 for apparatus for reshaping or vulcanizing a tire including a curing bag inserter or remover.

50.2 Spreader and tire casing relatively movable or rotatably mounted: This subclass is indented under subclass 50.1. Apparatus in which (a) the spreader is provided with means to move it, or adapting it for movement, relative to the casing while the casing is in spread condition, or (b) the spreader and casing are supported for rotary movement together.

SEE OR SEARCH CLASS:

157, Wheelwright Machines, subclasses 1.22+ for devices for assembling or disassembling tires and wheels embodying tire-engaging means adapted to move circumferentially of the tire.

50.3 Fluid pressure operated: This subclass is indented under subclass 50.1. Apparatus in which the spreader operating means is actuated by fluid pressure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

93, and the notes thereto, for pushing and pulling devices in general, operated by fluid pressure.

50.4 With tire casing support: This subclass is indented under subclass 50.1. Apparatus in which the spreader is provided with means which support the tire casing against the action of gravity.

SEE OR SEARCH THIS CLASS, SUBCLASS:

50.2, and 50.3, for devices having supports for the spread tire in addition to the characteristics provided for in those subclasses.

SEE OR SEARCH CLASS:

248, Supports, appropriate subclasses for supports in general.

84 TRAVERSING JACK: This subclass is indented under the class definition. Lifting jack which comprises, in addition to the lifting means, other means for moving the load or permitting it to be moved laterally other than by bodily movement of the jack as a whole.

(1) Note. Some patents for the traversing mechanism alone are included, the apparatus being designed for use as a base or support for a lifting jack. Jacks provided merely with a rocking head or base have not been placed here unless they include mechanism for positively shifting the load.

SEE OR SEARCH CLASS:
104, Railways, subclasses 262+ for car-replacing jacks which both lift and traverse the vehicle by a single operation.
212, Traversing Hoists, appropriate subclasses for traversing hoists from which the load is suspended.

85 Screw:
This subclass is indented under subclass 84. Traversing jack in which either the lifting or the traversing, or both, are performed by screw mechanism.

88 INCLINED PLANE LIFTER:
This subclass is indented under the class definition. Lifting implement comprising an incline up which the load or load-carrying member travels.

SEE OR SEARCH THIS CLASS, SUBCLASS:
5, 45 and 50, for hoist truck and vehicle body lifters using inclined planes.

SEE OR SEARCH CLASS:
104, Railways, subclass 262 for car-shifting inclines leading to the level of the rail.
193, Conveyors, Chutes, Skids, Guides, and Ways, subclass 41 for ways which may be placed in inclined position.

89 MULTIPLE LIFTERS (E.G., VEHICLE LIFTS):
This subclass is indented under the class definition. Lifting implement comprising a plurality of lifting members operating upon the load at different points.

SEE OR SEARCH THIS CLASS, SUBCLASS:
2, 45+, 86, 88, and search particularly 264+, for apparatus for hauling or hoisting a load including at least one driven device for either pulling on a cable attached to the load or traveling along a fixed cable with the load; the cable or device may engage a single load at plural points.

SEE OR SEARCH CLASS:
5, Beds, subclasses 625+ for invalid beds having means to move the frame up and down.
104, Railways, subclasses 32.1+ for lifters combined with special arrangements of track.
182, Fire Escape, Ladder, or Scaffold, subclasses 141+ for an elevating platform.
187, Elevator, Industrial Lift Truck, or Stationary Lift Vehicle, subclasses 203+ for a stationary lift for a roadway vehicle which elevates the entire vehicle to a significantly higher level where it is inspected or repaired.

90 Track straddling platform:
This subclass is indented under subclass 89. Portable platform usually for supporting hoisting apparatus and mounted upon multiple lifting means, so as to straddle a track or roadway.

SEE OR SEARCH CLASS:
212, Traversing Hoists, subclass 314 for vertically adjustable travelling bridge cranes; and subclasses 324+ for gantry-type bridges.

91 Swinging platform:
This subclass is indented under subclass 89. Multiple lifters comprising a plurality of swinging bars supporting a platform or skeleton frame serving as the equivalent of a platform.

SEE OR SEARCH THIS CLASS, SUBCLASS:
10, and 49, for hoist trucks and vehicle body lifters using swinging bars.

92 Screw:
This subclass is indented under subclass 89. Multiple lifters in which the load is lifted directly by screws.

SEE OR SEARCH THIS CLASS, SUBCLASS:
7, for hoist trucks using a screw to raise the load.

SEE OR SEARCH CLASS:
104, Railways, subclasses 32.1+ for track changers employing screw devices.
187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclass 214 for a screw driven stationary lift for a roadway vehicle which elevates the entire vehicle to a significantly higher level where it is inspected or repaired.

93 FLUID PRESSURE:
This subclass is indented under the class definition. Pushing and pulling implements actuated by fluid pressure.

SEE OR SEARCH THIS CLASS, SUBCLASS:
50.3, for tire spreaders employing fluid pressure means.
201, and 228, for implements or apparatus for tensioning flexible material or extracting stumps or poles having and expansible chamber fluid motor drive.
385, for apparatus for hauling or hoisting a load including rotatable, cable contacting, pulley wheel elements attached to and reciprocated by an expansible fluid motor.

SEE OR SEARCH CLASS:
60, Power Plants, subclasses 325+ for a motor of general utility driven by motive fluid from a pressure fluid source.
91, Motors: Expansible Chamber Type, appropriate subclasses for expansible chamber motors, per se.
100, Presses, subclasses 269.01+ for a fluid pressure actuated reciprocating press construction.
418, Rotary Expansible Chamber Devices, for rotary expansible chamber devices, per se.

94 Rocking supports:
This subclass is indented under the class definition. Lifting implements comprising a rigid supporting element which lifts the load by a rocking movement about the base of the supporting element.

(1) Note. This subclass is not intended to include rocking lifting devices when any means is provided for producing the rocking movement other than by the mere lateral movement of the load itself.

SEE OR SEARCH THIS CLASS, SUBCLASS:
49, for vehicle body lifters using swinging side bars.

95 RACK AND PINION:
This subclass is indented under the class definition. Pushing and pulling implement comprising an extensible rack member actuated by a pinion for operating upon the load.

SEE OR SEARCH THIS CLASS, SUBCLASS:
6, 12, 205, 230, and 341, for implements or apparatus including a rack and pinion, or pinion segment drive.

SEE OR SEARCH CLASS:
74, Machine Element or Mechanism, subclass 422 for the rack and pinion mechanism, per se.

96 Screw pinion:
This subclass is indented under subclass 95. Rack and pinion pushing and pulling implement in which the pinion is of a spiral or screw form.

97 Geared:
This subclass is indented under subclass 95. Rack and pinion pushing and pulling implement comprising rotary gears for actuating the rack-engaging pinion.

SEE OR SEARCH THIS CLASS, SUBCLASS:
6, for hoist trucks using rack and pinion or segment lift gear.

98 SCREW:
This subclass is indented under the class definition. Pushing and pulling implement comprising an extensible screw member for operating upon the load.

SEE OR SEARCH THIS CLASS, SUBCLASS:
7, 85, 92, 204, and 231+, for implements or apparatus including screw drive.

SEE OR SEARCH CLASS:
74, Machine Element or Mechanism, sub 424.7 and subclasses 424.71 through 424.96 for gearing, per se.
248, Supports, subclasses 404+ and 422 for screw members operating to vertically adjust a stand or stool.

99 Derrick type:
This subclass is indented under subclass 98. Screw pushing and pulling implement comprising a derrick structure from which the load is suspended.

100 Special engaging feature:
This subclass is indented under subclass 98. Screw pushing and pulling implement including some special structure in the means for engaging the load or the support.

SEE OR SEARCH THIS CLASS, SUBCLASS:
7, 13, 20, 30, 41, 54, and 67, for screw-type implements of special utility.

SEE OR SEARCH CLASS:
29, Metal Working, subclasses 258+ for screw-type assembly or disassembly means.
72, Metal Deforming, subclass 390 for screw-actuated tool having relatively movable offset tool faces.
81, Tools, subclasses 3.33, 3.37, and 3.45 for closure removers for receptacles employing screw-actuated devices.
157, Wheelwright Machines, subclasses 8+ and 12 for tire tighteners and spoke extractors respectively employing screw-actuated devices.
248, Supports, subclasses 188.2+ for a leveling device combined with or requiring modification of a table leg or the like.
269, Work Holders, subclasses 240+ for patents to a device with relatively movable jaws actuated by screw nut means.

101 Rocking head or base:
This subclass is indented under subclass 100. Screw pushing and pulling implement comprising a pivoted or jointed head or base to permit rocking adjustment.

102 Telescoping screws:
This subclass is indented under subclass 98. Screw pushing and pulling implement which comprise a plurality of screws arranged to telescope one within another.

103 Geared:
This subclass is indented under subclass 98. Screw pushing and pulling implement comprising rotary gears for actuating the screw or the screw-actuating nut.

SEE OR SEARCH THIS CLASS, SUBCLASS:
7, and 92, implements or apparatus with a screw drive.
236, for implements or apparatus having intermeshing gears for driving screw.

104 WEDGE:
This subclass is indented under the class definition. Pushing and pulling implement comprising a traveling wedge.

(1) Note. Includes wedges, per se, not of a character deemed limited to a particular art.

SEE OR SEARCH THIS CLASS, SUBCLASS:
11, and 42, for floor jacks and printer's quoins which employ traveling wedges.

SEE OR SEARCH CLASS:
292, Closure Fasteners, subclass 342 for wedge structures for securing closures in adjusted positions.

299, Mining or In Situ Disintegration of Hard Material, subclass 23 for wedge-type means insertable in a hole in the earth to break up hard material in situ.

428, Stock Material or Miscellaneous Articles, subclass 585 for a metallic intermediate article having a tapered end.

105 STEP-BY-STEP TRAVELING BAR:

This subclass is indented under the class definition. Pushing and pulling implement not classifiable in the preceding subclasses comprising a bar adapted to engage a load or a support and means for causing it to travel in a step-by-step movement relative to other elements or the implement.

(1) Note. The "bar" may act as a lever and may itself be the power-applying or increasing lever, provided it has a bodily travel relative to other parts of the implement. It should be noted that the "travel" of the bar is relative. Hence, if the bar acts against a fixed support, the actual travel relative to such support will be performed by the other load-engaging elements.

(2) Note. For classification purposes, this subclass is considered superior to subclass 93 above.

SEE OR SEARCH THIS CLASS, SUBCLASS:

14, for a floor jack with a step-by-step traveling member.

244, for implements or apparatus including a bar component having plural holes and removable cooperating pins selectively engageable by a lever.

SEE OR SEARCH CLASS:

40, Card, Picture, or Sign Exhibiting, subclasses 349+ for a copyholder including a step-by-step traveling bar which engages and raises a platen to which copy is attached.

74, Machine Element or Mechanism, subclasses 111+ for the mechanical movement, per se.

106 Clutch actuated:

This subclass is indented under subclass 105. Pushing and pulling implement of the step-by-step traveling bar type in which the relative travel of the bar is produced by one or more reciprocating clutches.

(1) Note. The term "clutch" is here used to designate a bar-engaging device, generally annular, which engages opposite sides of a bar with a canting, clamping, or gripping action. The bar may be smooth or notched.

SEE OR SEARCH THIS CLASS, SUBCLASS:

31, for a pipe or rod lifter having a clutch means for engaging and shifting the pipe or rod.

210, and 245, for implements or apparatus having a lever and gripping means attached thereto for shifting a bar component.

SEE OR SEARCH CLASS:

40, Card, Picture, or Sign Exhibiting, subclass 350 for a copyholder including one or more clutches to move a step-by-step traveling bar attached to, and in turn moving a platen to which copy is secured.

107 Multiple driving clutches:

This subclass is indented under subclass 106. Pushing and pulling implement of the step-by-step traveling bar type comprising a plurality of alternately acting driving clutches.

SEE OR SEARCH THIS CLASS, SUBCLASS:

254, 259 and 384, for a hand-held lever with plural cable-engaging means movably attached thereto which alternately contact and pull on the cable.

SEE OR SEARCH CLASS:

401, Coating Implements With Material Supply, subclass 67 for a mechanical pencil, including alternately acting clutches, to move a rod of lead in step-by-step fashion.

108 Pawl actuated:
This subclass is indented under subclass 105. Pushing and pulling implement of the step-by-step traveling bar type in which the relative travel of the bar is produced by one or more reciprocating pawls engaging with the bar.

SEE OR SEARCH THIS CLASS, SUBCLASS:
206, and 237+, for implements or apparatus for tensioning flexible material or extracting stumps or poles which includes a ratchet bar and a driving pawl in their drives.

SEE OR SEARCH CLASS:
74, Machine Element or Mechanism, subclasses 575+ for the pawl and ratchet structure, per se.

109 Multiple driving pawls:
This subclass is indented under subclass 108. Pushing and pulling implement of the pawl-actuated step-by- step traveling bar type comprising a plurality of alternately acting driving pawls.

SEE OR SEARCH THIS CLASS, SUBCLASS:
238+, for implements or apparatus for tensioning flexible material or extracting stumps or poles which includes a ratchet bar and plural, disparate, driving pawls in their drive.

110 Reversing:
This subclass is indented under subclass 109. Pushing and pulling implement of the step-by-step traveling bar type comprising a plurality of alternately acting driving pawls and provided with means for continuously actuating the pawls in such sequence as to reverse the movement, as for gradually lowering a load.

111 Reversing:
This subclass is indented under subclass 108. Pushing and pulling implement of the pawl-actuated step-by-step traveling bar type provided with means for continuously actuating the pawls in such sequence as to reverse the movement, as in lowering a load.

112 Rack and lever:
This subclass is indented under subclass 105. Pushing and pulling implement of the step-by-step traveling bar type in which the relative travel is produced by a lever or part rigid therewith engaging directly with a rack member, the rack being on one of the two relatively traveling parts of the implements and the lever mounted upon the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:
105, for two racks acted upon alternately by a single lever.

113 SINGLE THROW LEVER AND BAR:
This subclass is indented under the class definition. Pushing and pulling implement comprising an operating lever and two relatively movable forcing members pivotally or slidably connected, generally a standard and a lifting bar, the entire working movement of the forcing members being produced by a single throw of the lever.

(1) Note. The load-engaging member or bar may also act as a lever, and such implements will be found here when they include a single throw hand lever actuating the load-engaging lever by direct contact or by rigid link connections.

SEE OR SEARCH THIS CLASS, SUBCLASS:
3, 15, 38, 212, and 246+, for implements or apparatus for tensioning flexible material or extracting stumps or poles including a lever and a linearly shifting, guided element attached thereto.

114 Sliding bar:
This subclass is indented under subclass 113. Pushing and pulling implement of the single throw lever and bar type in which the forcing members are arranged to slide one upon the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:
8, and 16, for hoist trucks and floor jacks employing single throw levers.

115 Rack bar and segment:
This subclass is indented under subclass 114. Pushing and pulling implement of the single throw lever and bar type in which one of the forcing members is a slidable rack engaged and actuated by a toothed segment forming a part of or rigidly connected to the actuating lever.

SEE OR SEARCH THIS CLASS, SUBCLASS:
12, for floor jacks employing rack and pinion or segment.

116 Adjustable:
This subclass is indented under subclass 114. Pushing and pulling implement of the single throw lever and bar type with sliding forcing members and comprising structure permitting a preliminary adjustment of length or height, as, for example, for the purpose of engaging loads at different heights from the supporting surface.

(1) Note. In appropriate subclasses under the title "Step-by-step traveling bar" will be found similar structures comprising in addition means whereby a forcing member may be given a step-by-step movement by successive reciprocations of the lever.

117 Lateral shoe:
This subclass is indented under subclass 116. Pushing and pulling implement of the single throw lever and sliding bar type comprising a laterally extending load-engaging shoe capable of adjustment to accommodate loads at different distances from the supporting surface.

118 Rack bar:
This subclass is indented under subclass 116. Pushing and pulling implement of the single throw lever and sliding bar type in which one of the forcing members is provided with rack teeth, notches or the like, whereby the initial length or height of the implement may be adjusted.

119 Adjustable:
This subclass is indented under subclass 113. Pushing and pulling implement of the single throw lever and bar type comprising structure permitting a preliminary adjustment of the length or height of the implement.

120 SINGLE THROW LEVER:
This subclass is indented under the class definition. Pushing and pulling implement comprising a lever engaging the load either directly or by means of a part supported by the lever only, the entire travel of the load while supported by the lever being produced by a single throw of the lever.

SEE OR SEARCH THIS CLASS, SUBCLASS:
3+, 8+, 17, 32+, 36+, 44, 45+, 62+, 77+, and 105+, for implements comprising a lever capable of bodily travel in a step-by-step movement while under load.

SEE OR SEARCH CLASS:
29, Metal Working, subclass 248 and 268 for pushing and pulling implements of the single throw lever type in the form of pliers or tweezers.
74, Machine Element or Mechanism, subclasses 519+ for lever mechanism in general as elements.
212, Traversing Hoists, subclass 342 for lever-type hoist.

121 Rail and tie lifter:
This subclass is indented under subclass 120. Implement of the single throw lever type especially designed for lifting railway rails or ties.

(1) Note. Other structural types of rail or tie lifters are classified in the various structural subclasses in this class.

SEE OR SEARCH THIS CLASS, SUBCLASS:
18+, for spike extractors adapted to rest upon a rail.

SEE OR SEARCH CLASS:
104, Railways, subclass 2 for apparatus for lifting track structure combined with means for performing other track laying or repairing operations.

122 Lazy tongs:
This subclass is indented under subclass 120. Pushing and pulling implement of the single throw lever type in which the extensible or thrust producing member comprises lazy tongs levers.

SEE OR SEARCH CLASS:
14, Bridges, subclass 45 for draw bridges of the lazy tong type.
182, Fire Escape, Ladder, or Scaffold, subclasses 157+ for a lazy tong type ladder with mechanical or power-extending means.
187, Elevator, Industrial Lift Truck, or Stationary Lift forVehicle, subclasses 211 and 269 for a vehicle lift and an elevator having lazy tong-type supporting levers in their drive-means.

123 Lever supported thrust bar:
This subclass is indented under subclass 120. Implements of the single throw lever type comprising a thrust bar for engaging the load, such bar being pivoted to the lever and supported by the lever only.

SEE OR SEARCH THIS CLASS, SUBCLASS:
35, and 39, for analogous car pushers and door braces.

124 Mechanically actuated:
This subclass is indented under subclass 120. Pushing and pulling implement of the single throw lever type comprising mechanism for actuating the lever.

SEE OR SEARCH THIS CLASS, SUBCLASS:
113, and 119, for a single throw forcing lever directly actuated by a single throw hand lever.

126 Screw:
This subclass is indented under subclass 124. Pushing and pulling implement of the single throw lever type comprising screw mechanism for actuating the lever.

127 Cable:
This subclass is indented under subclass 124. Pushing and pulling implement of the single throw lever type comprising cable hauling mechanism for actuating the lever.

SEE OR SEARCH THIS CLASS, SUBCLASS:
46, for vehicle body lifters using a lever and drum.

128 Block and tackle:
This subclass is indented under subclass 127. Pushing and pulling implement of the single throw lever type comprising block and tackle mechanism for actuating the lever.

SEE OR SEARCH THIS CLASS, SUBCLASS:
127, for block and tackle actuated by a winding drum.

129 Adjustable:
This subclass is indented under subclass 120. Pushing and pulling implement of the single throw lever type including structure adapting the implement to preliminary adjustment, generally for the purpose of engaging loads at different heights.

(1) Note. Mere fixed structure, such as stepped lifting shoes, is excluded, also those implements which include freely swinging legs capable of being set at different angles unless there is means for holding the legs at a predetermined adjustment.

130 Multiple fulcrums:
This subclass is indented under subclass 129. Pushing and pulling implement of the adjustable single throw lever type in which the lever or its supporting structure is provided with a series of apertures, notches, or pins serving as alternative fulcrum points for the lever.

131 Special engaging feature:
This subclass is indented under subclass 120. Pushing and pulling implement of the single throw lever type comprising special structural features for engagement with the object upon which the implement is to act.

SEE OR SEARCH THIS CLASS, SUBCLASS:

17, 18+, 32, 35+, 39, 44, 50.2, and 121, for levers with engaging means especially modified for the purposes suggested by the titles.

129+, for engaging features relating to preliminary adjustment of the dimensions of the implement.

SEE OR SEARCH CLASS:

81, Tools, subclasses 3.37, and 3.55+ for analogous receptacles closure removing tools.

157, Wheelwright Machines, subclasses 1.1+ for lever tire-removing or-replacing implements.

212, Traversing Hoists, subclass 342 for lifting levers suspended from an overhead trolley.

254, Implements or Apparatus for Applying Pushing or Pulling Force, subclasses 18+ for disc cutting devices with special engaging features.

294, Handling: Hand and Hoist-Line Implements, subclass 17 for cant hooks with special engaging features.

131.5 Fulcrumed fork or shovel:

This subclass is indented under subclass 131. Single throw lever implement comprising either fork or shovel in combination with a fixed or movable element serving as fulcra in handling the load.

SEE OR SEARCH CLASS:

171, Unearthing Plants or Buried Objects, subclasses 82 and 100 for buried object-recovery devices rocking or fulcrumed on the ground or about a supporting axle in a manner to dig into and unearth plants or like objects embedded in the ground.

132 Root puller type:

This subclass is indented under subclass 131. Single throw lever implement especially adapted for pulling stumps, posts, weeds or stones from the ground.

(1) Note. For forks and shovels useful for pulling or lifting weeds, see Class 294, Handling: Hand and Hoist-Line Implements, appropriate subclasses, particularly subclasses 50.5 to 50.9.

SEE OR SEARCH CLASS:

47, Plant Husbandry, subclasses 73+ for devices adapted to transplant live trees or plants.

171, Unearthing Plants or Buried Objects, subclasses 50+ for devices having a wheel-or ground-supported frame and means to grasp, hold and pull out of the ground plants, roots or like objects buried or partially embedded therein.

280, Land Vehicles, subclasses 47.131+ for similar devices designed for grasping and transporting loads.

414, Material or Article Handling, subclass 23 for vehicles adapted to pull a tree from the ground when provided with additional structure for use in transporting a tree.

133 SPECIAL ENGAGING ELEMENTS:

This subclass is indented under the class definition. Implements wherein significance is attributed to the means for engaging the objects between which the implement exerts a thrust or pull.

(1) Note. This subclass does not include grapples or similar grasping or suspending devices.

SEE OR SEARCH THIS CLASS, SUBCLASS:

2, through 50.4 and 199+, inclusive, for engaging features appropriate to the uses for which the implements there classified are designed.

86+, for means for attachment to a vehicle.

100, 121 and 131, for various types of pushing and pulling implements with special engaging features.

134 Adjustable:

This subclass is indented under subclass 133. Implements including means for preliminary adjustment of the implement to different initial distances between the points of engagement before the forcing mechanism is operated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

116+, 119, 121+, and 129+, also all subclasses including in the title the words "step-by-step."

SEE OR SEARCH CLASS:

248, Supports, subclasses 274.1+ for adjustable brackets.

269, Work Holders, subclasses 165+ for patents to a device including means to adjust the position of relatively movable jaws.

134.3 METHOD OR APPARATUS FOR PLACEMENT OF CONDUCTIVE WIRE:

This subclass is indented under the class definition. Subject matter relating to process or apparatus for the placement of electric cables, or leaders therefore, in conduits, or poles, along messengers or similar relatively inaccessible supporting means.

SEE OR SEARCH CLASS:

29, Metal Working, subclass 241 for apparatus for stringing parts on an attenuated or elongated means, or for passing such means through a part or parts.

104, Railways, subclasses 138.1+ for a tubular railway, including a moving car, which is disclosed as being useful for placing a wire or strand within the conduit.

226, Advancing Material of Indeterminate Length, appropriate subclasses for methods of, and apparatus for, feeding material without utilizing the leading or trailing ends to effect movement of the material.

294, Handling: Hand and Hoist-Line Implements, appropriate subclasses, especially subclass 19.1 for miscellaneous cable-handling implements.

405, Hydraulic and Earth Engineering, subclass 154.1 for a method or apparatus for laying, retrieving, manipulating, or treating a pipe or cable in a subterranean or submarine location. See especially subclass 184 for advancing a subterranean length of cable.

134.4 By fluid pressure differential in conduit (e.g., parachute sucked through conduit):

This subclass is indented under subclass 134.3. Subject matter wherein a vane or similar fixture is connected to the conductor and may be caused to move through the conduit by a fluid current therein.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclasses 3.5+ for devices for cleaning the inside of a tubular conduit by introducing therein a solid cleaning agent and a fluid other than that normally handled in the conduit; subclass 104.06 for cleaning implements propelled through a conduit by fluid flowing therein; and subclass 104.12 for devices wherein a cleaning instrumentality is propelled through a conduit by mechanical traction developed by a motor means actuated by a fluid not confined solely by the conduit.

137, Fluid Handling, subclasses 242+ for mechanical cleaning of an installed fluid-handling system.

226, Advancing Material of Indeterminate Length, may include a nominal recitation of a supply or take-up coil (e.g., less than a support for such a coil or a cooperative relationship between a tension or exhaust detector and reel-driving or reel-stopping means, etc.), subclass 97.4 for a vacuum jet for a strand.

406, Conveyors: Fluid Current, appropriate subclasses for analogous subject matter, viz., propelling articles through a conduit by means of a fluid current.

134.5 Tractor for pulling wire (e.g., battery-powered):

This subclass is indented under subclass 134.3. Subject matter having means for exerting traction on the cable, at a point which is relatively inaccessible, by mechanical reaction between the cable at said point and the environment (e.g., aerial messenger) at said point.

SEE OR SEARCH THIS CLASS, SUBCLASS:

134.3, where the wire-placing means is a fishing member which extends to an accessible location.

134.7, where the wire-placing means is a series of sectional members which, when coupled, extend to an accessible location.

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 104.12 for devices wherein a cleaning instrumentality is propelled through a conduit by mechanical traction developed by a motor means actuated by a fluid not confined solely by the conduit.

134.6 Step-by-step type, (e.g., by camming against messenger):

This subclass is indented under subclass 134.5. Subject matter in which the tractor is provided with intermittent grip means for causing it to move in a stepwise fashion.

(1) Note. For example, by jerking on the accessible portion of the cable, the tractor may be caused, through the use of spring energy devices and suitable mechanical movements, to crawl along a messenger in steps.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclass 84 for mechanisms for converting reciprocating motion into intermittent unidirectional motion.

226, Advancing Material of Indeterminate Length, subclass 120 for means to advance material in a step-by-step manner.

134.7 Sectional members for fishing:

This subclass is indented under subclass 134.3. Subject matter which consists of sectional rods which may be joined end to end.

SEE OR SEARCH CLASS:

403, Joints and Connections, appropriate subclasses for joints of general utility.

199 PORTABLE IMPLEMENTS OR APPARATUS FOR TENSIONING FLEXIBLE MATERIAL OR FOR EXTRACTING STUMPS OR POLES:

This subclass is indented under the class definition. Implements or apparatus for (a) contacting and applying a pulling force to at least a portion of a flexible member, (e.g., cable, fabric, strand, wire, etc.), to place the member in a stressed (e.g., stretched, tensioned, etc.) condition or (b) dislodging an article in the nature of a stump or pole (including a fence post, tree, etc.), from its embedment in the ground, the implement or apparatus being detachable from the member or article and movable to a different location after use.

(1) Note. The implements or apparatus of this subclass are intended to be separable from the article being stressed or dislodged and are not intended to remain with, or become a component of, the article after it has been stressed or dislodged.

(2) Note. The dislodging implements or apparatus of this subclass are not intended to move the article more than an insignificant distance subsequent to its extraction from its original location.

(3) Note. If permanent deformation of the strand, etc., occurs, it is incidental to, rather than the intended purpose of, the tensioning.

SEE OR SEARCH CLASS:

5, Beds, subclasses 211+ for a stretcher forming a part of bed frame or bottom structure; and subclasses 305+ for bedstead braces.

7, Compound Tools, subclass 117 for compound tools which are used to stretch fence wire.

12, Boot and Shoe Making, appropriate subclasses for boot and shoe stretchers; and subclass 109 and 110+ for leather-stretching implements of special application to lasting.

24, Buckles, Buttons, Clasps, etc., subclasses 19+, 32+ or 68+ for a tightener which either (a) is a permanent component of, (i.e., permanently

attached thereto or formed therewith) a belt or strap, or (b) is a separable component of a belt or strap which remains therewith while the belt or strap is in use and is ordinarily detached therefrom during periods of nonuse.

26, Textiles: Cloth Finishing, subclasses 51+ and 71+ for devices other than stationary frames for stretching or pulling cloth.

38, Textiles: Ironing or Smoothing, subclasses 70 and 102+ for stretching garments to smooth fabrics.

69, Leather Manufactures, appropriate subclasses, particularly subclass 46 for leather-stretching machines; and subclasses 19.1+ for a skin or hide stretcher.

81, Tools, appropriate subclasses for tools used in tensioning peculiar types of flexible material during an assembly or disassembly operation, particularly subclass 15.8 for skid chain-applying tools; and subclass 9.3 for hose clamp appliers, and subclasses 300+ and 487 for a hand held clamp adapted to grip a flexible article and by which a direct pull may be given to tension or manipulate the flexible article.

100, Presses, subclass 32 for binding apparatus in the nature of a stationary machine not otherwise provided for, including means by which a binder encircles material and is tensioned to increase its tightness about the material.

114, Ships, subclass 109 for permanent elements of ships' rigging; and subclass 223 for rigging tighteners which are not permanent elements of the rigging.

140, Wireworking, subclasses 93.2+ for binder-tensioning and end-joining implements; subclass 102.5 for loop-forming stretchers applicable to a wire strand intermediate its ends; subclasses 108+ for wire fabric stretchers; and subclasses 123.5+ for stretching implements including means for performing other wireworking operations besides stretching.

157, Wheelwright Machines, subclass 1.14 for apparatus for pulling or joining the wires of solid rubber tires.

211, Supports: Racks, subclasses 119.09 and 119.15 for means permanently attached to a clothesline to tighten the same.

217, Wooden Receptacles, subclass 94 for permanent hoop tighteners.

223, Apparel Apparatus, subclasses 15 and 52, and indented subclasses, for implements especially designed to distend articles of apparel.

227, Elongated-Member-Driving Apparatus, subclasses 12+ for a stretching tool with means to fasten flaccid work to a rigid base.

249, Static Molds, subclass 213 for tie rods or wires having a force-multiplying component permanently attached thereto or remaining with the rods or wires when they are in use with a static mold.

256, Fences, subclasses 37+, and indented subclasses, for stretching devices forming a permanent part of fence structure.

267, Spring Devices, subclass 69 for elastic extension devices.

294, Handling: Hand and Hoist-Line Implements, particularly subclass 8.6 and 132+ for flexible material-engaging means which are used with a material-tensioning apparatus.

403, Joints and Connections, appropriate subclasses for two members joined by a connection comprising a tensioning means which remains with the members after the tensioning is effected.

473, Games Using Tangible Projectile, subclass 493 for a post for supporting a net used for a playing field or court game such as tennis, volleyball, table tennis, etc., which post includes a means to tension the net; subclasses 494+ for such a net in which a means to tension the net may be included; subclass 534 for a racket (e.g., a tennis racket, etc.) with adjustable string-tensioning means; and subclasses 556 and 557 for an accessory device for applying a tension upon a string(s) of a racket.

200 Material comprises resilient floor covering (e.g., carpet):
This subclass is indented under subclass 199. Implements or apparatus wherein the member being stressed is a broad, relatively thin, generally rectangular piece of resilient fabric or other resilient structure used for covering a floor.

SEE OR SEARCH CLASS:
16, Miscellaneous Hardware, subclass 5 for carpet fasteners provided with stretching means.

201 Including fluid or spring driven cylinder:
This subclass is indented under subclass 200. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the resilient fabric or structure is moved by driving structure including a fluid or spring powered telescoping device.

202 Including force transmitting cable and driven, rotatable, cable engaging drum:
This subclass is indented under subclass 200. Implements or apparatus including a driven drum which rotates about an axis fixed relative to another portion of the implement or apparatus, and which winds about its axis, or otherwise engages and pulls, a cable which is adapted to be connected (a) to the resilient fabric or structure or (b) to a portion of the implement or apparatus which is adapted to be connected to the fabric or structure.

SEE OR SEARCH THIS CLASS, SUBCLASS:
266+, for load hauling or hoisting apparatus including a rotatably driven drum and cable.

203 Including driven, rotatable, floor covering engaging and pulling drum:
This subclass is indented under subclass 200. Implements or apparatus including a driven drum which rotates about an axis fixed relative to another portion of the implement or apparatus, and which engages and pulls the resilient fabric or structure.

204 Including screw drive:
This subclass is indented under subclass 200. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the resilient fabric or structure is moved by driving structure including a threaded, cylindrical rod which either (a) rotates to move a cooperating threaded rider (e.g., follower) along its longitudinal axis, or (b) is axially shifted by, and relative to, a cooperating, rotating, force-transmitting, threaded element.

SEE OR SEARCH THIS CLASS, SUBCLASS:
85, 92, 98+, and 231+, for implements or apparatus including a screw drive.

205 Including rack and pinion, or pinion segment, drive:
This subclass is indented under subclass 200. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the resilient fabric or structure is moved by driving structure including a bar having a row of teeth or apertures on at least one of its sides and a rotatable circular gear, or a segment thereof, having teeth, or a protrusion acting in the manner of a tooth, which intermesh with the row to shift the bar linearly, the gear or gear segment being in constant engagement with the row while the fabric or resilient structure is being stressed.

SEE OR SEARCH THIS CLASS, SUBCLASS:
6, 12, 95, 230, and 341, for implements or apparatus including a rack and pinion, or pinion segment, drive.

206 Including ratchet bar and driving pawl drive:
This subclass is indented under subclass 200. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the resilient fabric or structure is moved by driving structure including a bar having a row of teeth or apertures on at least one of its sides, and a reciprocable pawl which engages one or more of the teeth or apertures of the bar when reciprocating in one of its directions and which disengages from the teeth or apertures during its return movement, the pawl shifting relative to the bar along its length as the pawl sequen-

tially engages the teeth or apertures of the row while the fabric or resilient structure is being stressed.

(1) Note. A reciprocating rack which engages and pulls on either a fixed pin, or a pin which is shifted only linearly when pulled by the rack, is not considered proper for this subclass and will be found in subclasses 209+.

SEE OR SEARCH THIS CLASS, SUBCLASS:

108+, for a ratchet bar shifted by a driving pawl.

207 Having plural, disparate, driving pawls:

This subclass is indented under subclass 206. Implements or apparatus having two or more distinct and separate pawls which engage the teeth or apertures on the bar.

208 Including rotatable, pulley wheel element and cable:

This subclass is indented under subclass 200. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the resilient fabric or structure is moved by force-multiplying structure which includes a traveling cable reeved around an element rotatable about an axis through its center and having a generally circular perimeter, the element rotating in response to the movement of the cable over its perimeter.

(1) Note. See (1) Note and (2) Note of subclass 390.

209 Including force transmitting, hand held and operated, lever:

This subclass is indented under subclass 200. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the resilient fabric or structure is moved by force multiplying or driving, structure including a hand-engaged lever which is reciprocable about a pivot point by the operator.

210 With means attached thereto for sequentially gripping, shifting and releasing bar component:

This subclass is indented under subclass 209. Implements or apparatus with means attached to the lever for transmitting force from the lever to a bar component of the implement or apparatus, and wherein the bar component is (a) gripped by the means, (b) shifted linearly relative to the pivot point of the lever, as the lever pivots and (c) released by the means when the lever and means are repositioned relative to the component for additional resilient fabric or structure tensioning.

SEE OR SEARCH THIS CLASS, SUBCLASS:

106+, for a bar shifted by one or more reciprocating clutches, (i.e., gripping means).

211 With floor covering clamping means attached to lever:

This subclass is indented under subclass 209. Implements or apparatus in which the lever has means supported by and attached to it for gripping and holding a portion of the resilient fabric or structure during the stressing or pulling operation.

212 Having linearly shifting, guided component attached thereto:

This subclass is indented under subclass 209. Implements or apparatus in which the lever is attached to a rigid force transmitting component of the implement or apparatus which is moved linearly by the lever, the component being limited to linear movement during the stressing of the resilient fabric or structure by another portion of the implement or apparatus.

213 Including rotatably driven drum for engaging either material or force transmitting cable:

This subclass is indented under subclass 199. Implements or apparatus including a driven drum which rotates about an axis fixed relative to another portion of the implement or apparatus, and which winds about its axis, or otherwise engages and pulls, either (1) the flexible member or (2) a cable which is (a) adapted to be connected to, or (b) attached to a portion of the implement or apparatus which is adapted to be connected to, the flexible member or article.

(1) Note. The term “cable” is used herein to designate a flexible element, such as rope, chain, wire or a flat band.

(2) Note. The other portion of the implement or apparatus may be no more than a clamp, hook, etc.

(3) Note. The term "drum" is used in this and the indented subclasses to designate a rotatable structure, (e.g., capstan, driven pulley, driven sprocket wheel, gipsy, spindle, spool, wildcat, winding drum, windlass, etc.), which is caused to turn about an axis of rotation by a drive source and which has a perimeter for contacting and pulling on the cable or flexible member, whereby a driving force is transmitted from the source, by way of either the drum and cable, or the drum, to the flexible member or the article.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266+, for load-hauling or-hoisting apparatus including a rotatably driven drum and cable.

SEE OR SEARCH CLASS:

256, Fences, subclasses 40+ for a stretching device which includes a winding element and forms a permanent part of a fence structure.

214 Plural drums or drum with plural distinct sections:

This subclass is indented under subclass 213. Implements or apparatus including either (a) two or more driven drums, or (b) a driven drum with two or more distinct, structurally separated, flexible member or cable-contacting regions for pulling on (1) different members or cables, or (2) different ends of the same member or cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

278+, for load-hauling or-hoisting apparatus including two or more rotatably driven drums for pulling on cable.

215 Juxtaposed to material or cable at single locus:

This subclass is indented under subclass 214. Implements or apparatus wherein the two or more driven drums have their flexible member or cable contacting portions closely clustered around a single point for simultaneously engaging the same segment of cable or flexible member to grip it therebetween.

SEE OR SEARCH THIS CLASS, SUBCLASS:

287, for load-hauling or-hoisting apparatus including two or more rotatably drive drums juxtaposed to and pulling on a cable at a single locus.

216 Having pressure element spaced therefrom to confine material or cable thereagainst:

This subclass is indented under subclass 213. Implements or apparatus including an element spaced from the drum's periphery just far enough to allow the flexible member or cable to barely pass between the drum and element at their nearest point, the cable or member at this point is slightly compressed, or has a compressive force placed on it, by the drum and element, and consequently is caused to advance by the contact of the cable or member with the drum's periphery.

SEE OR SEARCH THIS CLASS, SUBCLASS:

333, for load-hauling or-hoisting apparatus including a rotatably driven drum and a pressure element spaced therefrom for confining a cable against its surface.

217 Having ratchet wheel and interengaging pawl for driving drum:

This subclass is indented under subclass 213. Implements or apparatus wherein the drum is rotated about its axis by a drive train which includes a rotatable wheel having teeth on its inner or outer perimeter and a pawl which is reciprocated along a linear or angular path; the pawl engages the teeth and turns the wheel during movement in one of its directions and disengages from the teeth during its return movement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

306+, 320, 352+, and 369, for load-hauling or-hoisting apparatus including a rotatably driven drum provided with a drive having a ratchet wheel and an interengaging driving pawl.

218 Pawl pivots about fixed point on drive handle:

This subclass is indented under subclass 217. Implements or apparatus in which the drive train is powered by a hand-operated lever and the pawl is pivotally attached to the lever at a fixed point.

219 Having intermeshing gears for driving drum:

This subclass is indented under subclass 213. Implements or apparatus in which the drum is rotated about its axis by a drive train including two or more gears having teeth engaged with each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

295+, and 342+, for load-hauling or-hoisting apparatus including a rotatably driven drum provided with a drive having two or more intermeshing gears.

220 Worm and worm wheel:

This subclass is indented under subclass 219. Implements or apparatus wherein at least two of the gears comprise a worm and a worm wheel.

SEE OR SEARCH THIS CLASS, SUBCLASS:

296, and 343, for load-hauling or hoisting apparatus including a rotatably driven drum provided with a drive having two intermeshing gears of the worm and worm wheel type.

221 With projections or apertures on drum for engagement with complementary formations on material or cable:

This subclass is indented under subclass 213. Implements or apparatus in which the drum has projections or apertures located on its perimeter for engaging corresponding apertures or projections formed along the length of the flexible member or cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

372, for load-hauling or hoisting apparatus including a rotatably driven drum provided with projections or apertures on its circumference for interengagement with complementary formations on the cable.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 52+ for feeding apparatus having means to engage longitudinally spaced modifications in a material of indeterminate length.

222 With means for preventing or retarding rotation in at least one direction:

This subclass is indented under subclass 213. Implements or apparatus including means (e.g., a shiftable stop or lock) for preventing or retarding movement of the drum about its axis in at least one of its directions of rotation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

310, 321+, 356+, and 378+, for load-hauling or-hoisting apparatus including a rotatably driven drum provided with means for preventing or retarding rotation of the drum in at least one direction.

223 Ratchet wheel or formation and pawl:

This subclass is indented under subclass 222. Implements or apparatus wherein the means consists of either (a) a wheel having teeth located on its perimeter, the wheel being rotatably interconnected to the drum, and a pawl which interlocks with the teeth in one direction of the wheel's rotation to prevent movement of the drum and which disengages from the teeth in the other direction of the wheel's rotation to allow movement of the drum, or (b) a stationary ratchet formation having teeth located on its perimeter and a pawl connected to the drum which revolves around an axis when the drum is rotated; the pawl interlocks with the teeth in one direction of its travel to prevent movement of the drum and disengages from the teeth in the other direction of its travel to allow movement of the drum.

SEE OR SEARCH THIS CLASS, SUBCLASS:

217+, for a drum having drive train which includes a ratchet wheel and a pawl interengaging therewith, and which may also include an additional pawl

for preventing movement of the drum in one direction.

357, and 376, for load-hauling or -hoisting apparatus including a rotatably driven drum provided with a ratchet wheel and locking pawl for preventing rotation of the drum in one direction.

224 With adjustable gripping device for attaching drum to rigid, in situ structure:

This subclass is indented under subclass 213. Implements or apparatus with relatively movable clamping members and a take-up device therefor connected to the drum for firmly attaching it to a rigid, fixed, structural element (e.g., a fence post).

225 With material or cable contacting infeed guide:

This subclass is indented under subclass 213. Implements or apparatus with at least one guide element spaced a distance from the drum over which the flexible member or cable passes as it is wound upon or pulled toward the drum.

(1) Note. The distance between the element and the perimeter of the drum is large enough to allow the flexible member or cable to pass unimpeded.

226 Rotatable pulley wheel element:

This subclass is indented under subclass 225. Implements or apparatus wherein the guide element is in the nature of a wheel rotatable about an axis through its center and having its perimeter formed for contact with the traveling flexible member or cable, the element rotating in response to the movement of the member or cable over its perimeter.

(1) Note. See (1) Note and (2) Note of subclass 390.

SEE OR SEARCH THIS CLASS, SUBCLASS:

242, for other implements or apparatus including a pulley wheel element and cable.

283+, and 334+, for load-hauling or -hoisting apparatus including a rotatably driven drum and a pulley wheel element spaced therefrom.

227 With ground-engaging support means:

This subclass is indented under subclass 213. Implements or apparatus in which the drum is supported, at least in part, by means engageable with the ground and movable with the drum to a new location.

228 Including expansible chamber fluid motor drive:

This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by driving structure including a fluid powered telescoping device.

SEE OR SEARCH THIS CLASS, SUBCLASS:

93+, for implements actuated by fluid pressure.

229 Including worm and worm wheel gear drive:

This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by driving structure including an intermeshing worm and worm wheel gear.

230 Including rack and pinion or pinion segment, drive:

This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by driving structure including a bar having a row of teeth or apertures on at least one of its sides and a rotatable, circular gear or a segment thereof, having teeth or a protrusion acting the manner of a tooth, which intermesh with the row to shift the bar linearly, the gear or gear segment being in constant engagement with the row while the member is stressed or the article is dislodged.

SEE OR SEARCH THIS CLASS, SUBCLASS:

6, 12, 95, 205, and 341, for implements or apparatus including a rack and pinion, or pinion segment, drive.

231 Including screw drive:
This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by driving structure including a threaded, cylindrical rod which either (a) rotates to move a cooperating threaded rider along its longitudinal axis or (b) is axially shifted by, and relative to, a cooperating, rotating, force transmitting threaded element.

SEE OR SEARCH THIS CLASS, SUBCLASS:
20, 85, 92, 98+, and 204, for implements or apparatus including a screw drive.

232 Plural screws:
This subclass is indented under subclass 231. Implements or apparatus including two or more distinct, threaded, cylindrical rods.

233 Having plural, oppositely shifting, threaded riders:
This subclass is indented under subclass 232. Implements or apparatus wherein at least two threaded riders are moved by the rods and travel in opposite directions.

234 Having plural, oppositely shifting, threaded riders:
This subclass is indented under subclass 231. Implements or apparatus in which at least two threaded riders are moved by the rod and travel in opposite directions.

235 Having ratchet wheel and pawl for driving screw:
This subclass is indented under subclass 231. Implements or apparatus in which either the rod, rider or threaded element is rotated about its axis by a drive train which includes a rotatable wheel having teeth on its perimeter and a pawl which is reciprocated along a linear or angular path; the pawl engages the teeth and turns the wheel during movement in one of its directions and disengages from the teeth during its return movement.

236 Having intermeshing gears for driving screw:
This subclass is indented under subclass 231. Implements or apparatus in which either the rod, rider or threaded element is rotated about its axis by a drive train including two or more gears having teeth engaged with each other.

237 Including ratchet bar and driving pawl drive:
This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by a driving structure including a bar having a row of teeth or apertures on at least one of its sides and a reciprocable pawl which engages one or more of the teeth or apertures of the bar when reciprocating in one of its directions and which disengages from the teeth or apertures during its return movement, the pawl shifting relative to the bar along its length as the pawl sequentially engages the teeth or apertures of the row while the member is being stressed or the article is being dislodged.

(1) Note. A reciprocating rack which engages and pulls on either a fixed pin, or a pin which is shifted only linearly when pulled by the rack, is not considered proper for this subclass and will be found in subclasses 243+.

SEE OR SEARCH THIS CLASS, SUBCLASS:
108+, for a ratchet bar shifted by a driving pawl.

238 Having plural, disparate, driving pawls:
This subclass is indented under subclass 237. Implements or apparatus having two or more distinct and separate pawls which engage the teeth or apertures on the bar.

SEE OR SEARCH THIS CLASS, SUBCLASS:
109+, for a ratchet bar shifted by multiple driving pawls.

239 Plural ratchet formations:
This subclass is indented under subclass 238. Implements or apparatus in which either (a) the bar is provided with at last two distinct rows or

teeth or apertures engaged by the driving pawls, or (b) there are two or more distinct bars each having a row of teeth or apertures engaged by one or more of the driving pawls.

240 Facing opposite directions:
This subclass is indented under subclass 239. Implements or apparatus wherein two of the rows have their pawl receiving portions facing in opposite directions.

241 Including intermeshing gear drive:
This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by driving structure including two or more gears which have their teeth engaged with each other.

242 Including rotatable, pulley wheel element and cable:
This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by force multiplying structure which includes a traveling cable reeved around an element rotatable about an axis through its center and having a generally circular perimeter adapted for contact with the cable, the element rotating in response to the movement of the cable over its perimeter.

(1) Note. See (1) Note and (2) Note of subclass 390.

SEE OR SEARCH THIS CLASS, SUBCLASS:
226, for a rotatable driven drum and a pulley wheel element spaced therefrom.

243 Including either force transmitting, hand held and operated lever or animal powered sweep:
This subclass is indented under subclass 199. Implements or apparatus wherein the portion of the implement or apparatus adapted to contact the flexible member or article is moved by force multiplying or driving, structure including either (a) a hand-engaged and-powered lever which is reciprocable about a pivot point or (b) a draft animal attached and powered lever which is rotated about a pivot point.

244 Implement or apparatus includes bar component having plural holes and removable cooperating pins selectively engageable by lever:
This subclass is indented under subclass 243. Implements or apparatus in which the force multiplying or driving, structure also includes a bar component having a plurality of holes located along its length and at least two removable pins which are insertable into the holes, the lever selectively engaging the pins as it travels along the bar.

245 With means attached thereto for sequentially gripping, shifting, and releasing bar component:
This subclass is indented under subclass 243. Implements or apparatus with means attached to the lever for transmitting force from the lever to a bar component of the implement or apparatus and wherein the bar component is (a) gripped by the means, (b) shifted linearly, relative to the pivot point of the lever, as the lever pivots and (c) released by the means when the lever and means are repositioned relative to the component for additional flexible member tensioning or article dislodging.

SEE OR SEARCH THIS CLASS, SUBCLASS:
106+, for a bar shifted by one or more reciprocating clutches, (i.e., gripping means).

246 Having linearly shifting, guided component attached thereto:
This subclass is indented under subclass 243. Implements or apparatus in which the lever is attached to a rigid force-transmitting component of the implement or apparatus which is moved linearly by the lever, the component being limited to linear movement during the stressing of the flexible member, or the dislodging of the article, by another portion of the implement or apparatus.

247 With ratchet formation and locking pawl for maintaining relative positioning:
This subclass is indented under subclass 246. Implements or apparatus wherein the relative positioning of the lever and the shifting component is maintained by a pawl adapted to engage a row of teeth or apertures formed on either (a)

the shifting component, or (b) the portion of the implement or apparatus limiting the shifting component to linear movement.

248 With additional, hand held lever pivotally attached thereto for applying pulling force in opposite direction:
This subclass is indented under subclass 243. Implements or apparatus in which the force multiplying structure include an additional hand-engaged lever connected to the first lever at its pivot point, the flexible member being stressed, or the article dislodged, when the levers are simultaneously rotated in opposite directions.

249 Having position locking means between levers:
This subclass is indented under subclass 248. Implements or apparatus having locking means provided between the two levers to maintain their position relative to one another.

250 With camming means thereon, and pressure element spaced therefrom to confine material, or force transmitting cable, thereagainst:
This subclass is indented under subclass 243. Implements or apparatus in which the lever is provided with means formed on, or attached to, it for either engaging the flexible member or a force-transmitting cable attached to the member or article and wherein the implement or apparatus is further provided with an element spaced from the means and having a cable contacting surface, the means sequentially contacting the cable, camming it against the element, and pushing or pulling it along the element's surface when the lever is rotated in one direction.

251 With material, article or force transmitting cable clamping means attached to and shifting with lever:
This subclass is indented under subclass 243. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the flexible member, the article or a force-transmitting cable connected to the member or article includes means attached to the lever and shifting with it during pivoting for gripping, between relatively movable elements of the means, either the member, article or cable during the stressing or dislodging operation.

252 Including cooperating, relatively stationary means for intermittently locking material or cable:
This subclass is indented under subclass 251. Implements or apparatus including member or cable-locking means which is stationary relative to the lever's pivot point and which cooperates with the lever and the gripping means attached thereto, the locking means intermittently holding and preventing movement of the member or cable when the lever is being positioned to apply a tensioning force and then releasing and allowing movement of the member or cable while the lever is applying a tensioning force.

253 Plural clamping means:
This subclass is indented under subclass 251. Implements or apparatus wherein the lever has two or more gripping means attached to it and shifting with it during pivoting.

254 Alternately clamping and pulling on material or cable:
This subclass is indented under subclass 253. Implements or apparatus in which the member or cable is alternately pulled on by each of the gripping means during the stressing operation, each means sequentially (a) gripping the member or cable while the other means releases it, (b) pulling on the member or cable as it is shifted in one direction by the lever and (c) releasing the member or cable when the other means grips and begins to pull on the member or cable.

(1) Note. The force needed to apply or release the gripping means during the stressing operation is not provided directly by the hand of the operator.

SEE OR SEARCH THIS CLASS, SUBCLASS:

384, for load-hauling or-hoisting apparatus including a hand-held lever with plural engaging means movably attached thereto for alternately contacting and either (1) pulling on a cable attached to the load, or (2) traveling along the cable with the load.

255 Attached by flexible connector:
This subclass is indented under subclass 253. Implements or apparatus in which each of the gripping means is attached to the lever by a supple, connecting element.

256 With material, article or force transmitting cable engaging means movably attached to and shifting with lever:
This subclass is indented under subclass 243. Implements or apparatus in which the portion of the implement or apparatus adapted to contact the flexible member, the article, or a force-transmitting cable connected to the member or article includes means movably attached to the lever and shifting with it during pivoting for engaging the member, article, or cable during the stressing or dislodging operation.

257 Including cooperating, relatively stationary means for intermittently locking material or cable:
This subclass is indented under subclass 256. Implements or apparatus including member or cable-locking means which is stationary relative to the lever's pivot point and which cooperates with the lever and the engaging means attached thereto, the locking means intermittently holding and preventing movement of the member or cable when the lever is being positioned to apply a tensioning force and then releasing and allowing movement of the member or cable while the lever is applying a tensioning force.

258 Plural, movably attached engaging means:
This subclass is indented under subclass 256. Implements or apparatus wherein the lever has two or more engaging means movably attached to it and shifting with it during pivoting.

259 Alternately engaging and pulling on material or cable:
This subclass is indented under subclass 258. Implements or apparatus in which the member or cable is alternately pulled on by each of the engaging means during the stressing operation, each means sequentially (a) engaging the member or cable while the other means releases it, (b) pulling on the member or cable as it is shifted in one direction by the lever and (c) releasing the member or cable when the other mean engages and begins to pull on the member or cable.

(1) Note. The engaging means is not directly placed into or removed from contact with the member or cable by the hand of the operator during the above sequence.

SEE OR SEARCH THIS CLASS, SUBCLASS:
384, for load-hauling or-hoisting apparatus including a hand-held lever with plural engaging means movably attached thereto for alternately contacting and either (1) pulling on a cable attached to the load or (2) traveling along the cable with the load.

260 Attached by flexible connector:
This subclass is indented under subclass 258. Implements or apparatus in which each of the engaging means is attached to the lever by a supple, connecting element.

261 This subclass is indented under subclass 243. With means pivotally connected to lever and adapted to engage rigid, in situ structure: Implements or apparatus in which the lever is provided with means pivotally connected to it which is especially adapted to engage a rigid, in situ structure, (e.g., a fence post) and position the lever relative to it.

262 Including adjustable gripping device for attaching implement or apparatus to rigid, in situ structure:
This subclass is indented under subclass 199. Implements or apparatus including relatively movable clamping members and a take-up device therefore for firmly attaching the implement or apparatus to a rigid, fixed, structural element (e.g., a fence post).

263 Including ground engaging means for supporting implement or apparatus in plural, vertically spaced positions:
This subclass is indented under subclass 199. Implements or apparatus supported, at least in part, by portable means engageable with the ground and either (a) having implement or apparatus supporting structure adjustable vertically with respect to the ground or (b) having

plural, vertically spaced, implement or apparatus supporting structures located on it.

264 APPARATUS FOR HAULING OR HOISTING LOAD, INCLUDING DRIVEN DEVICE WHICH CONTACTS AND PULLS ON CABLE:

This subclass is indented under the class definition. Apparatus for transporting or shifting the object in its entirety from one definite position or location to another, including a driven device which contacts and pulls on a segment of a cable when the object is transported or shifted, and further wherein either (1) the segment of the cable is attached to (a) the object, or (b) a structure which supports the object, and is shifted with it from one location or position to another, or (2) the device pulling on the cable is attached to (a) the object, or (b) a structure which supports the object and travels along the length of the cable with the object from one position or location to another.

(1) Note. For an object transporting or shifting apparatus to be proper for this and the indented subclasses, at least one segment of the cable should move relative to a cable-contacting component of the apparatus, (e.g., cable wound or unwound by a drum, cable pulled by driven device over a pulley spaced therefrom, etc.), when the object is shifted or transported from one location or position to another; classification is elsewhere in this class if the cable acts as a simple link between the driven device and the object being pulled, (e.g., subclasses 93, 95, 98, 120, etc.).

(2) Note. The driven device and cable structure classified in this and the indented subclasses is that which is at least disclosed as either being used to (1) transport a load which is removable or detachable from the driven device, cable, or supporting structure attached to the driven device or cable, or (2) bodily shift an entire article, such as an anchor, between two definite positions. On the other hand, if the cable and its driven pulling device are disclosed as being used only to (a) apply a force between elements of a machine, such as a pump or a press, (b) transmit force to operate a mechanism from one to another of its positions, such as a railroad hand-brake operator, (c) apply a force to adjust a portion of an article or apparatus relative to another portion of the article or apparatus, such as an awning operator, or (d) transmit force from a force input point to a force output point, such as a drive pulley and belt, classification is elsewhere, (e.g., Classes 74, 242, or the appropriate structure class). In the absence of any disclosure as to the use contemplated for the cable-pulling device, classification is in some other class based on other details of the invention or in Class 242 based on details of a cable winding or unwinding drum structure or the winding of the cable onto a drum.

(3) Note. The claimed combination of the subject matter appropriate for this subclass (see (2) Note of this subclass) and means which is intended to continually contact and restrict or guide the movement of the object (or the structure which is connected to the driven device or cable for supporting the object) to a fixed path of travel, is not proper for this and the indented subclasses and classification is in subclass 387 of this class or elsewhere, (e.g., Classes 74, 104, 187, etc.).

(4) Note. A wheeled roadway or railway vehicle having a cable hoist mounted thereon and a load supporting portion for receiving the load from the hoist is classifiable in Class 414, subclasses 467+. A cable or rail guided wheeled carrier which travels in a small restricted area, (e.g., a warehouse) and has a cable hoist mounted thereon is classifiable in Class 212. A wheeled carrier or vehicle capable of readily traveling outside a small, restricted area (e.g., highway truck, railway car) and having a cable hoist mounted thereon, which hoist does not transfer a load to a load supporting portion of the carrier or vehicle and is fixedly mounted on the carrier or vehicle, is not considered to fall within either of the above categories and is classifiable in this subclass (264) and the indented subclasses.

(5) Note. A wheeled roadway or railway vehicle having a motor powered, traction cable pulling device mounted on it, for propelling it from one point to another as the cable is pulled by the device, is found in either Class 180, subclass 7 or Class 104, subclasses 173+; if, however, the vehicle is not claimed or the device is disclosed as also being used to pull a load, classification is in this class (254). A traction cable pulling drum which is adapted to be secured directly to one of the wheels of a roadway or railway vehicle, and which pulls on the cable as the wheel is rotated to provide additional vehicle moving force, is found in Classes 74, 104, 180, 242 or 280. A traction cable pulling device which is not supported by the vehicle, but which propels it between one location and another, is found in either Class 254, when the vehicle is claimed broadly as a load or in an appropriate class, such as Class 104 or Class 280, when the vehicle is claimed in detail.

(6) Note. The term "cable" is used in this and the indented subclasses to designate a flexible, elongated, hauling element, such as a rope, chain, wire or a flat band.

SEE OR SEARCH CLASS:

5, Beds, subclasses 81.1+ for devices which lift or transfer an invalid from one part of a bed to another or from the bed to some other location.

24, Buckles, Buttons, Clasps, etc., subclasses 115+ for cord and rope holders.

27, Undertaking, subclass 32 for coffin raising or lowering devices which have a special feature, (e.g., coffin engaging clamps, grave decorations, concealing structure) adapting them for use in the undertaking art.

37, Excavating, subclasses 394+ and 398+ for an earth excavating type scoop or scraper shifted by a cable from one location to another.

43, Fishing, Trapping, and Vermin Destroying, subclass 8 for fish net handling apparatus which is adapted to engage a net in some manner as it is being pulled onto a support or to manipulate it during the fishing or loading operation.

59, Chain, Staple, and Horseshoe Making, subclasses 78+ for chain structure.

104, Railways, subclass 87 for the combination of a cable and rigid rail; subclasses 112+ for cable rails; subclass 165 for car-hauling apparatus comprising an endless cable; and subclasses 173+ for a cable car-hauling apparatus.

114, Ships, subclass 51 for raising submerged vessels by hoisting; subclasses 230.1+ for a mooring device for a ship; and subclass 242 for towing or pushing structure which may include a driven cable; subclasses 365+ for lifeboat handling devices.

160, Flexible or Portable Closure, Partition, or Panel, subclasses 193, 252+, 319+, 339, and 344+ for flexible closures having strand-type operating means.

172, Earth Working, subclasses 23+ for earth-working means driven from or guided by either a stationary object, (e.g., cable drum) or an anchor; and subclass 490 for an earth-working apparatus comprising a rotary drum actuator adapted to lift an earth-working tool for transport upon a wheeled frame.

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, appropriate subclasses for driven devices which pull on a cable and are disclosed and used in connection with the operation of elevators. For example, the recital of any of the following structure in the claims would be considered adequate to limit the driven device to use with an elevator: (a) attachment of the cable to the car; (b) car guiding means; (c) positioning of device relative to the car or elevator shaft; or (d) controls for device located on, or operable from, car.

212, Traversing Hoists, in general, for cable pulling devices for both lifting and traversing a load.

226, Advancing Material of Indeterminate Length, appropriate subclasses for method of and apparatus for feeding

material of indeterminate length, without utilizing the leading or trailing ends of the material to effect its movement.

242, Winding, Tensioning, or Guiding, subclasses 600+ for winding drum structure, per se; and subclass 157.1 for traversing guides in combination with a load-hauling or -hoisting, cable pulling drum.

343, Communications: Radio Wave Antennas, subclass 707 for trailing-type antennas with aircraft and which may include reels or other hauling apparatus; subclass 877 for antennas with a reel for the antenna; and subclass 903 for telescoping rod antennas having a flexible rod actuating means for extending and retracting the antenna.

414, Material or Article Handling, subclasses 142.8+, 460, 538, 540, and 559 for a driven device mounted on a vehicle which hauls or hoists a load into or onto a load-supporting member of the vehicle; subclasses 389, 391, 395, 399, and 400 for a driven device not mounted on a vehicle and which hauls or hoists a load into or onto a load-supporting member of the vehicle; subclass 423 for an elevating device having differentially operated cables for dumping a portable receptacle; and subclasses 564, 569, 570, and 571 for a load-hauling or-hoisting cable-pulling device used with a conveyor or other type handler.

452, Butchering, subclasses 79 and 178+ for hoisting or hauling apparatus combined with structures peculiar to use in butchering.

472, Amusement Devices, particularly subclass 78 for an amusement device for shifting a stage scenery or curtain by using hoisting apparatus.

265 Device includes driven, flexible, cable contacting belt:

This subclass is indented under subclass 264. Apparatus wherein the device includes a driven flexible belt which is partially wrapped around one or more rotatable belt-driving elements, the belt both contacts and pulls a segment of the cable when the object is transported or shifted.

266 Device includes rotatably driven, cable contacting drum:

This subclass is indented under subclass 264. Apparatus wherein the device includes a drum which is driven about an axis fixed relative to at least one other portion of the apparatus, the drum having a perimeter which contacts the cable and winds a segment of the cable around the drum's axis of rotation, or otherwise engages and pulls the segment of cable, when the object is transported or shifted.

(1) Note. The term “drum” is used in this and the indented subclasses to designate a rotatable structure, (e.g., capstan, driven pulley, driven sprocket wheel, gipsy, spindle, spool, wildcat, winding drum, windlass, etc.), which is caused to turn about an axis of rotation by a drive source and which has a perimeter for contacting and pulling on a cable, whereby a driving force is transmitted from the source, by way of the drum and cable, to the load.

(2) Note. In order to avoid the scattering of art of a related nature, it has not been possible to require that the drum always be claimed significantly for classification in this and the indented subclasses. Rather, the structure recited may be only minimal, (e.g., a projection on the drum, a bearing face at its axis) in some instances, or, in the extreme, the drum may appear only nominally in the claim, (e.g., the mere locating of it relative to another part of the haulage system, such as a cable guide pulley or a drive means for the drum).

(3) Note. Cable reeling devices which are used to lower a gravity influenced load by retarding the rotation of the cable reel or the movement of the cable wound thereon, but which do not have reel rotating power means capable of shifting the load either upwardly or horizontally, are found in Class 242, particularly subclass 396.

SEE OR SEARCH THIS CLASS, SUBCLASS:

47, for vehicle-body lifters which include a cable and drum for hoisting the body.

202, and 213+, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum and cable.

SEE OR SEARCH CLASS:

33, Geometrical Instruments, subclass 715 for sounding devices having an automatic reel for winding or unwinding a line which supports a weight or bob.

74, Machine Element or Mechanism, subclasses 89.2+ for a drum and cable used to reciprocate or oscillate one component of an apparatus relative to another component of the apparatus.

104, Railways, subclass 165 for car hauling apparatus comprising an endless cable; subclass 183 for car-hauling apparatus comprising a cable-winding drum; and subclass 235 for car-hauling apparatus comprising a cable-contacting drum moving along a fixed cable.

114, Ships, subclass 254 for a towing device which includes a cable storage means (e.g., a reel); and subclasses 365+ for a life craft handling device, and see the notes under the definition thereof.

182, Fire Escape, Ladder, or Scaffold, subclasses 37, 142+, 231+, and 236+ for apparatus having a strand contacting reel which is used in a fire escape or scaffold and either pulls on the strand or retards the descent of the portion of the strand supporting an occupant.

187, Elevator, Industrial Lift Truck, or Station Vehicle, subclasses 251+ for an elevator in which the car is lowered or raised by a cable attached to a winding drum.

198, Conveyors: Power-Driven, subclasses 804+ for endless power-driven conveyors.

242, Winding, Tensioning, or Guiding, subclasses 370+ for a reeling device for unwinding, rewinding, and storing elongated material.

248, Supports, subclasses 329+ for vertically adjustable supports suspended from a cord stored on a reel.

280, Land Vehicles, subclass 480 for articulated vehicles connected together by tow ropes; and subclasses 491.1+ for articulated vehicles connected by a retractable, foldable or knockdown-type draft or coupling member.

440, Marine Propulsion, subclass 34 for cable towing type propulsion system.

464, Rotary Shafts, Gudgeons, Housings, and Flexible Couplings for Rotary Shafts, appropriate subclasses for a flexible shaft coupling.

267 Having rotational speed governor for generating control impulse to rotation retarding means or drive:

This subclass is indented under subclass 266. Apparatus wherein the driven device also includes a governor, directly responsive to the rotational speed or variations in the rotational speed of the drum, and which generates a force which is transmitted to and regulates the operation of either (a) means for retarding the rotation of, (e.g., frictional brake) or (b) the drive for, (e.g., motor, clutch) the drum.

(1) Note. The speed governor of this subclass does not form an active portion of the drive train used to transmit power from the source to the drum.

SEE OR SEARCH CLASS:

173, Tool Driving or Impacting, subclasses 4+ for tool advancing means controlled by automatic control.

175, Boring or Penetrating the Earth, subclass 7 for boring a submerged formation from a floating support with a submerged independent anchored guide base; and subclasses 24+ for automatic controls for boring apparatus.

182, Fire Escape, Ladder, or Scaffold, subclasses 37, 142+, 231+, and 236+ for apparatus having a strand contacting reel which is used in a fire escape or scaffold and either pulls on the strand

or retards the descent of the portion of the strand supporting an occupant.

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclass 305 for an elevator having a control mechanism, the operation of which is dependent upon the speed of the car.

188, Brakes, subclasses 180+ for speed-responsive brakes.

268 Having mechanism, actuated by changes in position of drum relative to another component of device, for generating control impulse to rotation retarding means or drive:

This subclass is indented under subclass 266. Apparatus wherein the driven device also includes a mechanism which is actuated by the shifting or reorientation (i.e., movement other than the normal rotation) of either the circumference or rotational axis of the drum relative to at least one other stationary portion of the device, the mechanism when actuated generates a force which is transmitted to and regulates the operation of either (a) means for retarding the rotation of (e.g., frictional brake), or (b) the drive for (e.g., motor, clutch), the drum.

SEE OR SEARCH CLASS:

173, Tool Driving or Impacting, subclasses 4+ for tool-advancing means controlled by automatic control.

269 Having stationary mechanism, actuated by load or other obstruction on and traveling with cable, for generating control impulse to rotation retarding means or drive:

This subclass is indented under subclass 266. Apparatus provided with a stationary mechanism located along the path of the cable and actuated by either the load or some other obstruction on and traveling with the cable, the mechanism when actuated generates a force which is transmitted to and regulates the operation of either (a) means for retarding the rotation of or (b) the drive for the drum.

SEE OR SEARCH CLASS:

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclasses 282+ and 302+ for a limit control mechanism arranged to be actuated by an elevator car or a counterweight for the elevator car.

270 Having cable contacted, supported, or attached mechanism for generating control impulse to retarding means or drive:

This subclass is indented under subclass 266. Apparatus provided with a mechanism either contacted by, supported from, or attached directly to the cable, the mechanism generates a force which is transmitted to and regulates the operation of either (a) means for retarding the rotation of, or (b) the drive for, the drum.

SEE OR SEARCH CLASS:

114, Ships, subclass 247 for towing devices for ships having means, responsive to excess strain in the connecting means (e.g., cable).

166, Wells, subclass 355 for means mounted on a vessel and removably connected to a permanent submerged well structure, (e.g., wellhead, riser); this means is provided with means to compensate for the vessel's movement on the surface.

173, Tool Driving or Impacting, subclasses 4+ for tool-advancing means controlled by automatic control.

175, Boring or Penetrating the Earth, subclass 7 for boring a submerged formation from a floating support with a submerged independent anchored guide base; and subclasses 24+ for automatic controls for boring apparatus.

271 With cable contacting component, on or adjacent to circumference of drum, shifted by segment of wound cable:

This subclass is indented under subclass 270. Apparatus in which the mechanism has a shiftable component either located on or adjacent to the circumference of the drum, the component is shifted by a segment of the cable wound on the circumference of the drum and generates the regulating force to the rotation-retarding means or drive when shifted.

272 With cable deflecting or path defining component shifted by cable when tension varies:

This subclass is indented under subclass 270. Apparatus wherein the mechanism has a cable-contacting component which either (a) slightly

deflects a segment of the cable from the linear direction of adjacent segments or (b) defines a portion of the path of travel of a segment of the cable contacted by and moving relative to it, the component is shifted by the cable when the tension on the cable is varied and generates the regulating force to the rotation-retarding means or the drive when shifted.

SEE OR SEARCH CLASS:
166, Wells, subclass 355 for means mounted on a vessel and removably connected to a permanent submerged well structure, (e.g., wellhead, riser); this means is provided with means to compensate for the vessel's movement on the surface.

273 Electricity or fluid utilized in transmittal of impulse:
This subclass is indented under subclass 272. Apparatus in which either an electric or a fluid medium is utilized when the force is transmitted from the mechanism to the retarding means or drive.

274 Having mechanism, linked to drum or rotating element of drive, for generating control impulse to rotation retarding means or motor when torque on drum varies:
This subclass is indented under subclass 266. Apparatus wherein the driven device also includes a mechanism which is either linked to the drum or a rotating element of the drive for the drum and is responsive to variations in the amount of torque on the drum, the mechanism generates a force when the torque is varied, which is transmitted to and regulates the operation of either (a) means which retards the rotation of the drum or (b) a motor which is the source of power for the drive of the drum.

(1) Note. The torque-responsive mechanism of this subclass does not form an active portion of a drive train used in transmitting power from the motor to the drum.

(2) Note. The torque-responsive mechanism of this subclass is not located internally of the motor.

SEE OR SEARCH CLASS:
318, Electricity: Motive Power Systems, subclass 6 for an electric motor having a tension maintaining type of motor control.

275 Electricity utilized in transmittal of impulse:
This subclass is indented under subclass 274. Apparatus in which an electric medium is utilized when force is transmitted from the mechanism to the retarding means or motor.

276 Having mechanism, linked to drum and actuated by number of drum rotations, for generating control impulse to rotation retarding means of drive:
This subclass is indented under subclass 266. Apparatus wherein the driven device also includes a mechanism which is linked to the drum and is actuated when the drum has completed a predetermined number of rotations; the mechanism when actuated generates a force which is transmitted to and regulates the operation of either (a) means for retarding the rotation of, or (b) the drive for, the drum.

277 With fluid or resilient shock absorbing or tension maintaining means attached to, supported by, or supporting guiding structure for cable:
This subclass is indented under subclass 266. Apparatus provided with a fluid or resilient means which absorbs sudden changes in the amount of tension on the cable or keeps the amount of tension on the cable constant, and, in addition, is either directly attached to, supported by, or supports structure which defines the path of the cable.

SEE OR SEARCH CLASS:
114, Ships, subclass 215 for cable-tension relievers.
166, Wells, subclass 355 for means mounted on a vessel and removably connected to a permanent submerged well structure, (e.g., wellhead, riser); this means is provided with means to compensate for the vessel's movement on the surface.

278 Plural drums or drum with plural distinct sections:

This subclass is indented under subclass 266. Apparatus including either (a) at least one other driven, cable-contacting drum rotatable about an axis fixed relative to another portion of the apparatus, or (b) a driven drum with two or more distinct, structurally separated, cable-contacting regions which each pull on either different cables or different ends of the same cable.

(1) Note. At least one of the drums claimed in the patents found in this and its indented subclasses is of the type driven device described as proper for subclass 264. The other drum may, however, be of the type described in part (c) of (2) Note for subclass 264.

SEE OR SEARCH THIS CLASS, SUBCLASS:

214+, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including two or more rotatably driven drums.

279 With vehicle for supporting at least one drum:

This subclass is indented under subclass 278. Apparatus wherein at least one of the cable-pulling drums is mounted on a transporting vehicle (e.g., truck, ship, train).

(1) Note. If only one drum is of the object transporting or shifting type (see the exception of (1) Note, subclass 278) then that is the drum with which this subclass is concerned.

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclasses 370+ for a reeling device, especially subclasses 390.7, 391+, and 403+ for a reeling device associated with a vehicle.

414, Material or Article Handling, subclasses 142.8+, 460, 538, 540, and 559 for a driven device mounted on a vehicle which hauls or hoists a load into or onto a load-supporting member of the vehicle.

280 Having rotatable, cable guiding, pulley wheel element spaced from drums:

This subclass is indented under subclass 279. Apparatus including at least one cable-guiding element, (e.g., pulley, roller, sprocket) having a generally circular perimeter and rotating about an axis through its center in response to the movement of the cable over its perimeter, the element positioned along the path of travel of the cable and spaced a distance from both of the drums.

(1) Note. The distance between the perimeters of the element and the drums is large enough to allow the cable to pass unimpeded.

(2) Note. See (1) Note and (2) Note of subclass 390.

281 Element repositionable relative to at least one of the drums:

This subclass is indented under subclass 280. Apparatus in which the element may undergo a change in its position or attitude in relationship to one of the drums.

SEE OR SEARCH CLASS:

212, Traversing Hoists, subclasses 255+ and 223+ for a cable-pulling device for both lifting and traversing a load, the device includes a vehicle with a cable-pulling drum and a repositionable pulley mounted on it.

282 Drive for at least one drum includes motor of vehicle:

This subclass is indented under subclass 279. Apparatus in which at least one of the drums is rotatably driven about its axis by a drive which includes means for utilizing the power output of the vehicle's propulsion motor.

SEE OR SEARCH CLASS:

74, Machine Element or Mechanism, subclasses 11+ for power takeoffs from a prime mover.

180, Motor Vehicles, subclasses 53.1+ for power takeoffs from the motor of a vehicle.

283 Having rotatable, cable guiding, pulley wheel element spaced from drums:
This subclass is indented under subclass 278. Apparatus including at least one cable-guiding element (e.g., pulley, roller, sprocket) having a generally circular perimeter and rotating about an axis through its center in response to the movement of the cable over its perimeter, the element positioned along the path of travel of the cable and spaced a distance from both of the drums.

(1) Note. The distance between the perimeters of the element and the drums is large enough to allow the cable to pass unimpeded.

(2) Note. See (1) Note and (2) Note of subclass 390.

SEE OR SEARCH THIS CLASS, SUBCLASS:
226, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum and a pulley wheel element spaced therefrom.
390, for pulley wheel elements intended to be used with a hauling or hoisting drum.

284 Element repositionable relative to at least one of the drums:
This subclass is indented under subclass 283. Apparatus in which the element may undergo a change in its position or attitude in relationship to at least one of the drums.

285 Plural elements:
This subclass is indented under subclass 284. Apparatus wherein two or more rotatable, cable-guiding, pulley wheel elements are spaced from the drums, at least one of the elements changes its position or attitude in relationship to the drums.

286 Plural elements:
This subclass is indented under subclass 283. Apparatus wherein two or more rotatable, cable-guiding, pulley wheel elements are spaced from the drums.

287 Juxtaposed to cable at single locus:
This subclass is indented under subclass 278. Apparatus wherein at least two of the driven, cable-contacting drums have noncollinear axes of rotation and have their cable-contacting portions closely clustered around a single point, which drums either (a) simultaneously come into contact with the same segment of cable or (b) each one intermittently contacts a segment of the cable passing through the point.

SEE OR SEARCH THIS CLASS, SUBCLASS:
215, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including two or more rotatably driven drums juxtaposed to and pulling on a cable or the material at a single locus.

288 With means affixing at least one drum to supporting base and allowing movement between drum and base:
This subclass is indented under subclass 278. Apparatus in which one or more of the drums are joined to a supporting base by means which allows the rotational axis or circumference of the drums to shift, or change their orientation, relative to the juncture of the base and the means.

289 Movement engages or disengages drum from drive:
This subclass is indented under subclass 288. Apparatus wherein the selective shifting of the rotational axis or circumference of one or more of the drums either engages or disengages the shifting drums from their drive.

290 Plural, distinct, drive motors:
This subclass is indented under subclass 278. Apparatus wherein the drive for rotating the drums includes at least two motors which are distinct from each other and whose operation does not directly depend on one another.

291 Noncompressible fluid:
This subclass is indented under subclass 290. Apparatus wherein at least one of the motors is operated by fluid which is not appreciably reducible in volume by a change in pressure or temperature.

292 Electric:
This subclass is indented under subclass 290. Apparatus wherein at least one of the motors is operated solely by electricity.

293 Each drum having plural, distinct drive sources or discrete drive trains:
This subclass is indented under subclass 278. Apparatus wherein the drive for each drum includes either (a) two or more distinct drive sources, (e.g., a motor and a hand-operated crank, two spaced hand-operated cranks), or (b) two or more discrete drive trains, (i.e., they do not share either a common drive source or a common power-transmitting component) whose operations do not depend directly on one another.

294 Having common drive source or mechanically interlinked drive train:
This subclass is indented under subclass 278. Apparatus wherein the drive for at least two drums includes either (a) a common drive source, or (b) a drive train for each of the drums mechanically interlinked with one another, (i.e., the drive trains share at least one common or mutual power-transmitting component).

295 Including intermeshing gears in drive:
This subclass is indented under subclass 294. Apparatus in which the interlinked trains include two or more gears each having teeth formed on their circumference, the teeth of each gear engaging with those of at least one other gear and moving relative thereto when transmitting power from a drive source to the drums.

SEE OR SEARCH THIS CLASS, SUBCLASS:
219, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a drive having two or more intermeshing gears.

296 Worm and worm wheel:
This subclass is indented under subclass 295. Apparatus wherein at least two of the gears comprise a worm gear and a worm wheel gear.

SEE OR SEARCH THIS CLASS, SUBCLASS:
220, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with intermeshing gears of the worm and worm wheel type.

297 Epicyclic gear train having sun, intermediate, (e.g., planet) and ring gears:
This subclass is indented under subclass 295. Apparatus wherein the gears include an epicyclic gear arrangement in which a sun gear is engaged with an intermediate, (e.g., planet) gear which is also engaged with an encircling ring gear.

298 Shiftable into and out of intermeshing engagement:
This subclass is indented under subclass 295. Apparatus wherein at least one of the gears may be shifted into or out of engagement with another gear.

299 Also including clutch mechanism having coaxial, rotatable, relatively shiftable axially, power transmitting components:
This subclass is indented under subclass 295. Apparatus wherein the interlinked drive trains also include a clutch mechanism having a rotatable component which is rotated about its axis by the power source, the component, in its entirety, being relatively shiftable along its axis of rotation either (a) into contact with another component of the clutch mechanism causing this component to rotate about the same axis and to transmit power to at least one of the drums or (b) out of contact with the other component, allowing that component to stop rotating and not transmit power.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 66.1+ for a clutch having movable engaging elements which shift parallel to the axis of rotation of the elements.

300 With frictional brake assembly mechanically linked to, and operationally influenced by, clutch:
This subclass is indented under subclass 299. Apparatus wherein the clutch mechanism is mechanically connected to a frictional brake assembly which is used to stop or slow down the rotation of at least one of the drums, the connection between the clutch mechanism and the brake assembly being constructed in such a manner that when the rotating clutch components either engage or disengage each other, the brake is applied.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 12+ for a mechanism having a clutch and a brake applied alternately to drive or retard the mechanism.

301 With additional axially shiftable clutch mechanism mechanically linked to, and operationally influenced by, first clutch:
This subclass is indented under subclass 299. Apparatus wherein the interlinked drive trains include an additional clutch mechanism similar to the first and mechanically connected thereto, this connection being constructed in such a manner that when the first clutch mechanism engages its rotating components, the other will either engage or disengage its rotating components.

(1) Note. Although each clutch mechanism is by itself a distinct entity, they may have some parts in common, that is, a part may form one of the rotatable components of a first clutch mechanism at one time, and that part may also form one of the rotatable components of a second clutch mechanism at another time.

302 Alternately transmitting power:
This subclass is indented under subclass 301. Apparatus in which the clutch mechanisms are applied alternately to transmit power.

303 Fluid operated actuator shifts component:
This subclass is indented under subclass 299. Apparatus in which the rotatable components are shifted into and out of engagement by means operated by fluid power.

304 Components having frictional contact surface:
This subclass is indented under subclass 299. Apparatus in which the surface friction created by the contact of the rotatable components of the clutch mechanism is solely relied upon for the transmitting of rotary motion from one component to the other.

305 Truncated cone shaped:
This subclass is indented under subclass 304. Apparatus wherein the portion of the surface of each rotatable component coming into contact with the other has a generally truncated cone shape.

306 Also including ratchet wheel and driving pawl:
This subclass is indented under subclass 295. Apparatus wherein the interlinked drive trains also include a rotatable wheel having teeth on its perimeter and a pawl which is reciprocated along a linear or angular path by the power source; the pawl alternately engages the teeth and turns the wheel at least a portion of a revolution around its axis during movement in one of its directions and disengages the teeth during its return movement in the other direction.

SEE OR SEARCH THIS CLASS, SUBCLASS:
217, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a drive having a ratchet wheel and an interengaging driving pawl.

307 Plural driving pawls:
This subclass is indented under subclass 306. Apparatus having two or more distinct pawls, each of which engage the teeth of the wheel and rotate it.

308 Attached to rotatable disk or shaft:
This subclass is indented under subclass 307. Apparatus in which the pawls are attached to a driven rotatable disk or shaft.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 41+ for clutches which engage in one direction of rotation without manipulation.

309 Also including clutch mechanism having rotatable, radially shiftable, power transmitting component:
This subclass is indented under subclass 295. Apparatus wherein the interlinked drive trains also include a clutch mechanism having a component which is rotated about an axis by the power source, the component being shiftable radially away from or toward the axis of rotation into driving contact with another component of the clutch mechanism causing this component to transmit power to at least one of the drums.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 71 through 81 for a clutch having movable engaging elements which shifts transversely, (i.e., radially) to the axis of rotation of the elements.

310 With means for preventing or retarding rotation of one or more drums in at least one direction:
This subclass is indented under subclass 295. Apparatus provided with means, (e.g., a shiftable lock, friction brake) for either preventing movement of one or more of the drums about their axis in at least one of their directions of rotation or for slowing down the rotational speed of one or more of the drums in at least one direction of rotation.

SEE OR SEARCH THIS CLASS, SUBCLASS:
222, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably drive drum provided with means for preventing or retarding rotation of the drum in at least one direction.

311 Including sprocket wheel and chain in drive:
This subclass is indented under subclass 294. Apparatus wherein the interlinked drive trains include at least one rotatable wheel having a plurality of toothlike or other shaped projections on its periphery and a chain or apertured belt partially wrapped around the wheel and adapted to cooperate with the projections on the wheel.

(1) Note. The chain or apertured belt of this subclass is never attached or connected to the object being moved.

312 Including power transmitting pulley and rope or belt either in drive or in cable return means:
This subclass is indented under subclass 294. Apparatus wherein either (a) the interlinked drive trains for rotating the drums when the cable is pulled to transport or shift the object or objects, or (b) a means for rotating the drums and returning the object-contacting portion of the cable to its original position in relationship to one of the drums after the load has been transported or shifted, include at least one power-transmitting, rotatable element having a generally circular perimeter adapted for contact with either a driven or a driving power-transmitting rope or endless belt which is partially wrapped around it.

(1) Note. The driven or driving rope or belt of this subclass is never attached or connected to the object being moved.

SEE OR SEARCH CLASS:
187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclass 263 for an elevator supported by a cable which is pulled by a driving drum or sheave, the drum or sheave is driven by means of a hand rope.

313 Including contacting friction wheels having noncollinear axes of rotation in drive:
This subclass is indented under subclass 294. Apparatus wherein the interlinked drive trains include two or more wheels which (a) have their axes of rotation not forming segments of the same line, and (b) have their circumferences in contact with each other when transmitting power to at least one of the drums, the

surface friction created by the contact of the wheels is solely relied upon for the transmitting of rotary motion from one wheel to another wheel.

314 Including expansible, noncombustible, fluid motor in drive, (e.g., air, steam):
This subclass is indented under subclass 294. Apparatus wherein the drive source includes a motor of the kind operated by a fluid which (1) is appreciably expanded in volume by appropriate changes in either (a) the amount of pressure on it, or (b) its temperature, and (2) is of a generally noncombustible nature and undergoes no alterations in its chemical composition while in the motor.

315 Including noncompressible fluid motor or pump in drive:
This subclass is indented under subclass 294. Apparatus wherein the common drive source includes a motor or pump of the kind operated by a fluid which is not appreciably reducible in volume by a change in pressure or temperature.

316 Including electric motor in drive:
This subclass is indented under subclass 294. Apparatus wherein the common drive source includes a motor of the kind operated solely by electricity.

317 Including clutch mechanism in drive having coaxial, rotatable, relatively shiftable axially, power transmitting components:
This subclass is indented under subclass 294. Apparatus wherein the interlinked drive trains include a clutch mechanism having a rotatable component which is rotated about its axis by the power source, the component, in its entirety, being relatively shiftable along its axis of rotation either (a) into contact with another component of the clutch mechanism causing this component to rotate about the same axis and to transmit power to at least one of the drums, or (b) out of contact with the other component allowing that component to stop rotating and not transmit power.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 66.1+ for a clutch having movable engaging elements which shift parallel to the axis of rotation of the elements.

318 With frictional brake assembly, mechanically linked to and operationally influenced by, clutch:
This subclass is indented under subclass 317. Apparatus wherein the clutch mechanism is mechanically connected to a frictional brake assembly which is used to stop or slow down the rotation of the drums, the connection between the clutch mechanism and the brake assembly being contsructed in such a manner that when the rotating clutch components either engage or disengage each other the brake is applied.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 12+ for a mechanism having a clutch and a brake applied alternately to drive or retard the mechanism.

319 Components having frictional contact surface:
This subclass is indented under subclass 317. Apparatus in which the surface friction created by the contact of the rotatable components of the clutch mechanism is solely relied upon for the transmitting of rotary motion from the one component to the other.

320 Including ratchet wheel and interengaging driving pawl in drive:
This subclass is indented under subclass 294. Apparatus in which the interlinked drive trains include a rotatable wheel having teeth on its perimeter and a pawl which is reciprocated along a linear or angular path by the power source, the pawl alternately engages the teeth and turns the wheel at least a portion of a revolution around its axis during movement in one of its directions and disengages the teeth during its return movement in the other direction.

SEE OR SEARCH THIS CLASS, SUBCLASS:
217, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a drive having a ratchet wheel and an interengaging driving pawl.

321 Including means for preventing or retarding rotation of one or more drums in at least one direction:

This subclass is indented under subclass 294. Apparatus including means for either preventing movement of at least one of the drums about its axis in one or both of its directions of rotation or for slowing down the rotational speed of at least one of the drums in one or both of its directions of rotation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

222, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with means for preventing or retarding rotation of the drum in at least one direction.

322 Frictional brake assembly having rotating, wheel structure and shiftable shoe and band:

This subclass is indented under subclass 321. Apparatus wherein the means consist of a rotating, wheel structure which either (a) forms a portion of one of the drums, or (b) is mechanically connected to and has its rotation correlated with and dependent upon at least one of the drums, and an element shiftable into and out of contact with the wheel structure, the resistance caused by the surface friction created during the contact of the wheel structure and the element is relied upon to slow down or stop the rotation of at least one of the drums.

323 With vehicle for supporting drum:

This subclass is indented under subclass 266. Apparatus in which the cable pulling drum is mounted on a transporting vehicle, (e.g., truck, ship, train).

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclasses 370+, for a reeling device, especially subclasses 390.7, 391+, and 403+ for a reeling device associated with a vehicle.

414, Material or Article Handling, subclasses 142.8+, 460, 538, 540, and 559 for a driven device mounted on a vehicle which hauls or hoists a load into or onto a load-supporting member of the vehicle.

324 Having arch-shaped body for straddling load:

This subclass is indented under subclass 323. Apparatus wherein a portion of the vehicle's body has a generally inverted U-shape, this portion may be positioned over the object when the drum is pulling on the cable.

325 Having rotatable, cable guiding, pulley wheel element spaced from drum:

This subclass is indented under subclass 323. Apparatus including at least one cable-guiding element, (e.g., pulley, roller, sprocket) having a generally circular perimeter and rotating about an axis through its center in response to the movement of the cable over its perimeter, the element positioned along the path of travel of the cable and spaced a distance from the drum.

(1) Note. The distance between the perimeters of the element and the drum is large enough to allow the cable to pass unimpeded.

(2) Note. See (1) Note and (2) Note of subclass 390.

326 Element repositionable relative to drum:

This subclass is indented under subclass 325. Apparatus in which the element may undergo a change in its position or attitude in relationship to the drum.

SEE OR SEARCH CLASS:

212, Traversing Hoists, subclasses 255+ and 223+ for a cable pulling device which both lifts and traverses a load, the device includes a vehicle with a cable pulling drum and a repositionable pulley mounted on it.

327 Plural elements:

This subclass is indented under subclass 325. Apparatus in which two or more rotatable, cable guiding, pulley wheel elements are spaced a distance from the drum.

328 This subclass is indented under subclass 323. Drive for drum includes motor of vehicle: Apparatus wherein the drum is rotatably driven about its axis by a drive which includes means

for utilizing the power output of the vehicle's propulsion motor.

SEE OR SEARCH CLASS:
74, Machine Element or Mechanism, subclasses 11+ for power takeoffs from a prime mover.
180, Motor Vehicles, subclasses 53.1+ for power takeoffs from the motor of a vehicle.

329 With means affixing drum to supporting base and allowing relative movement therebetween:
This subclass is indented under subclass 266. Apparatus in which the drum is joined to a supporting base by means which allows the rotational axis or circumference of the drum to shift, or change its orientation, relative to the juncture of the base and the means.

330 Movement engages or disengages drum from drive:
This subclass is indented under subclass 329. Apparatus wherein the selective shifting of the axis or circumference of the drum from one position to another either engages or disengages the drum from its drive.

331 Movement occurs along line collinear with rotational axis of drum during pulling of cable:
This subclass is indented under subclass 329. Apparatus wherein the circumference of the drum shifts along a line which is collinear with its rotational axis, the cable being pulled by the drum during this movement.

332 Including pivotal, rotational or swivel connection between drum and base:
This subclass is indented under subclass 329. Apparatus wherein the means includes a connection which allows the axis or circumference of the drum to be pivoted, rotated, or swiveled about the juncture of the base and the means.

333 Having pressure element spaced from drum to confine cable thereagainst:
This subclass is indented under subclass 266. Apparatus including an element spaced from the drum's periphery just far enough to allow the cable to barely pass between the drum and element at their nearest point; the cable at this point is slightly compressed, or has a compressive force placed on it, by the drum and element, and consequently is caused to advance by the contact of the cable with the driven drum's periphery.

SEE OR SEARCH THIS CLASS, SUBCLASS:
216, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum and a pressure element spaced therefrom for confining a cable or the material against its surface.

334 Having rotatable, cable guiding, pulley wheel element spaced from drum:
This subclass is indented under subclass 266. Apparatus including at least one cable guiding element (e.g., pulley, roller, sprocket) having a generally circular perimeter and rotating about an axis through its center in response to the movement of the cable over its perimeter, the element positioned along the path of travel of the cable and spaced from the drum.

(1) Note. The distance between the perimeters of the element and the drum is large enough to allow the cable to pass unimpeded.

(2) Note. See (1) Note and (2) Note of subclass 390.

SEE OR SEARCH THIS CLASS, SUBCLASS:
226, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum and a pulley wheel element spaced therefrom.
390, for pulley wheel elements intended to be used with a hauling or hoisting drum.

335 Element repositionable relative to drum:
This subclass is indented under subclass 334. Apparatus in which the element may undergo a change in its position or attitude in relationship to the drum.

336 Plural elements:
This subclass is indented under subclass 335. Apparatus wherein two or more rotatable, cable guiding, pulley wheel elements are spaced from the drum, at least one of the elements changes its position or attitude in relationship to the drum.

337 Cable supported:
This subclass is indented under subclass 336. Apparatus in which the repositionable element or elements is supported by the object moving cable and changes its position or attitude when the cable is pulled by the drum.

338 Plural elements:
This subclass is indented under subclass 334. Apparatus wherein two or more rotatable, cable-guiding, pulley wheel elements are spaced from the drum.

339 Having plural, distinct drive sources or discrete drive trains:
This subclass is indented under subclass 266. Apparatus in which the drive for the drum includes either (a) two or more distinct drive sources, (e.g., a motor and a hand-operated crank, two spaced hand-operated cranks) or (b) two or more discrete drive trains, (i.e., they do not share either a common drive source or a common power transmitting component) whose operations do not depend directly on one another.

340 Including two or more motors:
This subclass is indented under subclass 339. Apparatus in which the drive sources for the drum include at least two motors.

341 Drive includes rack and either pinion or pinion segment:
This subclass is indented under subclass 266. Apparatus wherein the drive for the drum includes a bar having a row of teeth or apertures on at least one of its sides, and a rotatable circular gear, or a segment thereof, having teeth or protrusions acting in the manner of teeth which intermesh with the row, the gear or gear segment being in constant engagement with the row while the drum is pulling the cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:
6, 12, 95, 205, and 230, for implements or apparatus including a rack and pinion, or pinion segment, drive.

342 Drive includes intermeshing gears:
This subclass is indented under subclass 266. Apparatus wherein the drive for the drum includes two or more gears each having teeth formed on their circumference, the teeth of each gear engaging with those of at least one other gear and moving relative thereto when transmitting power from a drive source to the drum.

SEE OR SEARCH THIS CLASS, SUBCLASS:
219, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a drive having two or more intermeshing gears.

343 Worm and worm wheel:
This subclass is indented under subclass 342. Apparatus wherein one of the gears is a worm gear and another one is a worm wheel gear.

SEE OR SEARCH THIS CLASS, SUBCLASS:
220, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with intermeshing gears of the worm and worm wheel type.

344 Epicyclic gear arrangement including sun, intermediate, (e.g., planet), and ring gears:
This subclass is indented under subclass 342. Apparatus wherein at least some of the gears are arranged in an epicyclic gear configuration in which a sun gear is engaged with an intermediate, (e.g., planet) gear which is also engaged with an encircling ring gear.

345 Shiftable into and out of intermeshing engagement:

This subclass is indented under subclass 342. Apparatus wherein at least one of the gears in the drive may be shifted into or out of engagement with another gear.

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclass 263 for disengageable gears in a fishing reel and subclass 394 for a disengageable drive in a reeling device of general use.

346 Drive also includes clutch mechanism having coaxial, rotatable, relatively shiftable axially, power transmitting components:

This subclass is indented under subclass 342. Apparatus wherein the drive also includes a clutch mechanism having a rotatable component which is rotated about its axis by the power source, the component, in its entirety, being relatively shiftable along its axis of rotation either (a) into contact with another component of the clutch mechanism causing this component to rotate about the same axis and to transmit power to the drum, or (b) out of contact with the other component allowing it to stop rotating and not transmit power to the drum.

SEE OR SEARCH CLASS:

192, Clutches and Power-Stop Control, subclasses 66.1+ for a clutch having movable engaging elements which shift parallel to the axis of rotation of the elements.

242, Winding, Tensioning, or Guiding, subclasses 257+ for a clutched fishing reel and subclass 394 for a clutch in a reeling device of general use.

347 With frictional brake assembly, mechanically linked to and operationally influenced by, clutch:

This subclass is indented under subclass 346. Apparatus wherein the clutch mechanism is mechanically connected to a frictional brake assembly which is used to stop or slow down the rotation of the drum, the connection between the clutch mechanism and the brake assembly being constructed in such a manner that when the rotating clutch components either engage or disengage each other the brake is applied.

SEE OR SEARCH CLASS:

192, Clutches and Power-Stop Control, subclasses 12+ for a mechanism having a clutch and a brake applied alternately to drive or retard the mechanism.

348 With additional axially shiftable clutch mechanism, mechanically linked to and operationally influenced by, first clutch:

This subclass is indented under subclass 346. Apparatus wherein the drive includes an additional clutch mechanism similar to the first and mechanically connected thereto, this connection being constructed in such a manner that when the first clutch mechanism engages its rotating components the other will either engage or disengage its rotating components.

(1) Note. Although each clutch mechanism is by itself a distinct entity they may have some parts in common, that is, a part may form one of the rotatable components of a first clutch mechanism at one time, and that part may also form one of the rotatable components of a second clutch mechanism at another time.

349 Fluid operated actuator shifts component:

This subclass is indented under subclass 346. Apparatus in which the rotatable components are shifted into and out of engagement by means operated by fluid power.

350 Components having frictional contact surface:

This subclass is indented under subclass 346. Apparatus in which the surface friction created by the contact of the rotatable components of the clutch mechanism is solely relied upon for the transmitting or rotary motion from the one component to the other.

351 Truncated cone shaped:

This subclass is indented under subclass 350. Apparatus wherein the portion of the surface of each of the rotatable components which contacts the other components has a generally truncated cone shaped.

352 Drive also includes ratchet wheel and driving pawl:

This subclass is indented under subclass 342. Apparatus wherein the drive also includes a rotatable wheel having teeth on its perimeter and a pawl which is reciprocated along a linear or angular path by the power source, the pawl alternately engages the teeth and turns the wheel at least a portion of a revolution around its axis during movement in one of its directions and disengages the teeth during its return movement in the other direction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

217, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a drive having a ratchet wheel and an interengaging driving pawl.

353 Plural driving pawls:

This subclass is indented under subclass 352. Apparatus having two or more distinct pawls, each of which engages the teeth of the wheel and rotate it.

354 Attached to rotatable disk or shaft:

This subclass is indented under subclass 353. Apparatus in which the pawls are attached to a driven, rotatable disk or shaft.

SEE OR SEARCH CLASS:

192, Clutches and Power-Stop Control, subclasses 41+ for clutches which engage in one direction of rotation without manipulation.

355 Drive also includes clutch mechanism having rotatable, radially shiftable, power transmitting component:

This subclass is indented under subclass 342. Apparatus wherein the drive also includes a clutch mechanism having a component which is rotated about an axis by the power source, the component being shiftable radially away from or toward the axis of rotation into driving contact with another component of the clutch mechanism causing this component to transmit power to the drum.

SEE OR SEARCH CLASS:

192, Clutches and Power-Stop Control, subclasses 71 through 81 for a clutch having movable engaging elements which shift transversely, (i.e., radially) to the axis of rotation of the elements.

242, Winding, Tensioning, or Guiding, subclasses 257 and 262 for a radially applied clutch in a fishing reel and subclass 257 for a clutch in a reeling device of general use.

356 With means for preventing or retarding rotation of drum in at least one direction:

This subclass is indented under subclass 342. Apparatus provided with means, (e.g., a shiftable lock, friction brake) for either preventing movement of the drum about its axis in at least one of its directions of rotation or for slowing down the rotational speed of the drum in at least one direction.

SEE OR SEARCH THIS CLASS, SUBCLASS:

222, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with means for preventing or retarding rotation of the drum in at least one direction.

357 Ratchet wheel or formation and locking pawl:

This subclass is indented under subclass 356. Apparatus wherein the means consist of either (a) a wheel having teeth located on its perimeter, the wheel being rotatably interconnected to the drum and a pawl which interlocks with the teeth in one direction of the wheel's rotation to prevent movement of the drum and which disengages from the teeth in the other direction of the wheel's rotation to allow movement of the drum, or (b) a stationary ratchet formation having teeth located on its perimeter and a pawl connected to the drum which revolves around an axis when the drum is rotated; the pawl interlocks with the teeth in one direction of its travel to prevent movement of the drum and disengages from the teeth in the other direction of its travel to allow movement of the drum.

SEE OR SEARCH THIS CLASS, SUBCLASS:

223, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a ratchet wheel and locking pawl for preventing rotation of the drum in one direction.

306, 320, 352, and 364, for a drum having a drive train which includes a ratchet wheel and a pawl interengaging therewith, and which may also include an additional pawl for preventing movement of the drum in one direction.

358 Drive includes sprocket wheel and chain:
This subclass is indented under subclass 266. Apparatus wherein the drive includes at least one power transmitting rotatable wheel having a plurality of toothlike or other shaped projections on its periphery and a chain or apertured belt partially wrapped around the wheel and adapted to cooperate with the projections on the wheel.

(1) Note. The chain or apertured belt of this subclass is never attached or connected to the object being moved.

359 This subclass is indented under subclass 266. Either drive or cable return means includes power transmitting pulley and rope or belt: Apparatus wherein either (a) the drive for rotating the drum when the cable is pulled to transport or shift the object, or (b) a means for rotating the drum and returning the object contacting portion of the cable to its original position in relationship to the drum after the load has been transported or shifted, includes at least one power-transmitting, rotatable element having a generally circular perimeter adapted for contact with either a driven or a driving power-transmitting rope or endless belt which is partially wrapped around it.

(1) Note. The driven or driving rope or belt of this subclass is never attached or connected to the object being moved.

SEE OR SEARCH CLASS:

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclass 263 for an elevator supported by a cable which is pulled by a driving drum or sheave, the drum or sheave is driven by means of a hand rope.

360 Drive includes expansible, noncombustible, fluid motor (e.g., air, steam):
This subclass is indented under subclass 266. Apparatus wherein the drive includes a motor of the kind operated by a fluid which (1) is appreciably expanded in volume by appropriate changes in (a) the amount of pressure on it, or (b) it temperature, and (2) is of a generally noncombustible nature and undergoes no alterations in its chemical composition while in the motor.

361 Drive includes noncompressible fluid motor or pump:
This subclass is indented under subclass 266. Apparatus wherein the drive source includes a motor or pump of the kind operated by a fluid which is not appreciably reducible in volume merely by changing pressure or temperature.

362 Drive includes electric motor:
This subclass is indented under subclass 266. Apparatus wherein the drive source includes a motor of the kind operated solely by electricity.

363 Drive includes contacting friction wheels having noncollinear axes of rotation:
This subclass is indented under subclass 266. Apparatus wherein the drive includes two or more wheels which have (a) their axes of rotation not forming segments at the same line, and (b) their circumferences in contact with each other when transmitting power to the drum, the surface friction created by the contact of the wheels is solely relied upon for the transmitting of rotary motion from one wheel to another wheel.

364 Either drive or cable return means includes spring:
This subclass is indented under subclass 266. Apparatus wherein either (a) the drive for rotating the drum when the cable is pulled to transport or shift the object, or (b) a means for rotating the drum and returning the object con-

tacting portion of the cable to its original position in relationship to the drum after the load has been transported or shifted, includes an energy storing spring.

SEE OR SEARCH CLASS:
182, Fire Escape, Ladder, or Scaffold, subclasses 232 and 237 for a reel having a strand wound on it which is used in an occupant lowering fire escape and includes a spring for winding the strand after it has been unwound from the reel.

365 Drive includes clutch mechanism having coaxial, rotatable, relatively shifting axially, power transmitting components:
This subclass is indented under subclass 266. Apparatus wherein the drive includes a clutch mechanism having a rotatable component which is rotated about its axis by the power source, the component, in its entirety, being relatively shiftable along its axis or rotation either (a) into contact with another component of the clutch mechanism causing this component to rotate about the same axis and to transmit power to the drum, or (b) out of contact with the other component allowing it to stop rotating and not transmit power to drum.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 66.1+ for a clutch having movable engaging elements which shift parallel to the axis of rotation of the elements.
242, Winding, Tensioning, or Guiding, subclasses 257+ for a clutch in a fishing reel and subclass 257 for a clutch in a reeling device of general use.

366 With frictional brake assembly mechanically linked to, and operationally influenced by, clutch:
This subclass is indented under subclass 365. Apparatus wherein the clutch mechanism is mechanically connected to a frictional brake assembly which is used to stop or slow down the rotation of the drum, the connection between the clutch mechanism and the brake assembly being constructed in such a manner that when the rotating clutch components either engage or disengage each other the brake is applied.

SEE OR SEARCH CLASS:
192, Clutches and Power-Stop Control, subclasses 12+ for a mechanism having a clutch and a brake applied alternately to drive or retard the mechanism

367 Fluid operated actuator shifts component:
This subclass is indented under subclass 365. Apparatus in which the rotatable components are shifted into and out of engagement by means operated in response to the application of pressurized fluid.

368 Components having frictional contact surface:
This subclass is indented under subclass 365. Apparatus in which the surface friction created by the contact of the rotatable components of the clutch mechanism is solely relied upon for the transmitting of rotary motion from the one component to the other.

369 Drive includes ratchet wheel and interengaging driving pawl:
This subclass is indented under subclass 266. Apparatus in which the drive includes a rotatable wheel having teeth formed on its perimeter and a pawl which is reciprocated along a linear or angular path by the power source, the pawl alternately engages the teeth and turns the wheel at least a portion of a revolution around its axis during movement in one of its directions and disengages the teeth during its return movement in the other direction.

SEE OR SEARCH THIS CLASS, SUBCLASS:
217, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a drive having a ratchet wheel and an interengaging driving pawl.

SEE OR SEARCH CLASS:
242, Winding, Tensioning, or Guiding, subclasses 256+ for a ratchet drive in a fishing reel and subclass 389 for a ratchet drive in a reeling device of general use.

370 Drive includes clutch mechanism having rotatable, radially shiftable, power transmitting component:

This subclass is indented under subclass 266. Apparatus in which the drive includes a clutch mechanism having a component which is rotated about an axis by the power source, the component being shiftable radially away from or toward the axis of rotation into driving contact with another component of the clutch mechanism causing this component to transmit power to the drum.

SEE OR SEARCH CLASS:

192, Clutches and Power-Stop Control, subclasses 71 through 81 for a clutch having movable engaging elements which shift transversely, (i.e., radially) to the axis of rotation of the elements.

371 With means on circumference of drum, or relatively movable drum components, for grasping cable:

This subclass is indented under subclass 266. Apparatus in which the drum either (a) has means on or closely adjacent to and traveling with the cable contacting portion of its perimeter, or (b) has its cable contacting portion constructed from two or more components which move relative to each other, for sequentially grasping a segment of the cable, traveling with the segment around a portion of the drum's rotational path, releasing the segment, and then grasping another segment of cable.

372 With projections or apertures on drum for engagement with complementary structural formation on cable:

This subclass is indented under subclass 266. Apparatus in which the drum has projections or apertures located on its surface for engaging corresponding apertures or projections formed along the length of the cable.

SEE OR SEARCH THIS CLASS, SUBCLASS:

221, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with projections or apertures on its circumference for engagement with complementary formations on the cable or material.

SEE OR SEARCH CLASS:

226, Advancing Material of Indeterminate Length, subclasses 52+ for feeding apparatus having means to engage longitudinally spaced modifications in a material of indeterminate length.

373 With pickup or pushing means on circumference of drum for cooperating with structure attached to, or formed on, end of cable:

This subclass is indented under subclass 266. Apparatus including means rotating with the drum and either (a) formed on, or (b) connected to or closely adjacent to the cable contacting portion of the drum's circumference, and structure formed on or attached to the end of the cable, the means contacts and carries or pushes the structure when the drum pulls on the cable and releases it when the drum stops pulling on the cable.

374 Having noncircular or varying diameter, cable contacting perimeter:

This subclass is indented under subclass 266. Apparatus wherein the cable-contacting portion of the perimeter of the drum either has a noncircular shape (e.g., square) or has a varying diameter along its rotational axis, (e.g., cone shaped).

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclasses 602.1+ and 903 for a detail for a drum suitable for a winch or hoist, and subclass 613.2 for a spool drum of irregular cross section.

375 This subclass is indented under subclass 266. Including means for preventing or retarding rotation of drum in at least one direction: Apparatus including means for either preventing movement of the drum about its axis in at least one of its directions of rotation or for slowing down the rotational speed of the drum.

SEE OR SEARCH CLASS:

188, Brakes, subclasses 68 through 85 for brakes for retarding or stopping the rotation of a wheel.

242, Winding, Tensioning, or Guiding, subclasses 285+ for a brake in a fishing reel; subclasses 380+, 382+, and 385+ for a brake in a spring powered reel; subclasses 396+ for a brake in a reeling device of general use, and subclasses 421+ and 422+ for a brake for tensioning elongated material.

376 Ratchet wheel or formation and locking pawl:

This subclass is indented under subclass 375. Apparatus wherein the means consist of either (a) a wheel having teeth located on its perimeter, the wheel being rotatably interconnected to the drum, and a pawl which interlocks with the teeth in one direction of the wheel's rotation to prevent movement of the drum and which disengages from the teeth in the other direction of the wheel's rotation to allow movement of the drum, or (b) a stationary ratchet formation having teeth located on its perimeter and a pawl connected to the drum which revolves around an axis when the drum is rotated, the pawl interlocks with the teeth in one direction of its travel to prevent movement of the drum and disengages from the teeth in the other direction of its travel to allow movement of the drum.

SEE OR SEARCH THIS CLASS, SUBCLASS:

223, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with a ratchet wheel and locking pawl for preventing rotation of the drum in one direction.

306, 320, 352, and 369, for a drum having a drive train which includes a ratchet wheel and a pawl interengaging therewith, and which may also include an additional pawl for preventing movement of the drum in one direction.

377 Fluid resistance brake:

This subclass is indented under subclass 375. Apparatus wherein the means consist of a brake which utilizes the resistance force of a fluid against a portion of the brake structure to oppose the rotation of the drum.

SEE OR SEARCH CLASS:

182, Fire Escape, Ladder, or Scaffold, subclasses 233 and 238 for a reel having a strand wound on it which is used in an occupant lowering fire escape and includes a fluid resistance brake for retarding the unwinding of the strand from the reel.

188, Brakes, subclasses 266+ for internal resistance motion retarders.

378 This subclass is indented under subclass 375. Frictional brake assembly having rotating, wheel structure and shiftable shoe or band: Apparatus wherein the means consist of a rotating wheel structure which either (a) forms a portion of the drum, or (b) is mechanically connected to and has its rotation correlated with and dependent upon the drum, and an element shiftable into and out of contact with the wheel structure, the resistance used by the surface friction created during the contact of the wheel structure and the element is relied upon to slow down or stop the rotation of the drum.

SEE OR SEARCH THIS CLASS, SUBCLASS:

222, for implements or apparatus for tensioning flexible material or for extracting stumps or poles including a rotatably driven drum provided with means for preventing or retarding rotation of the drum in at least one direction.

379 Having fluid actuator for shifting shoe or band:

This subclass is indented under subclass 378. Apparatus in which the element is shifted into and out of engagement with the wheel by a mechanism which utilizes fluid force.

380 With portable housing for drum and hand manipulated means for removably fastening housing to supporting base or load:

This subclass is indented under subclass 266. Apparatus provided with a housing movable from one location to another and at least partially encasing or enclosing the drum, the housing having hand-manipulated means located thereon for detachably fastening it to a fixed supporting base or to the object.

(1) Note. The fastening means of this subclass is capable of relatively easy and quick detachment from the object or the supporting base by manual force without the assistance of tools.

381 With structure, (e.g., sweep, tree, yoke) adapting drum to be powered by draft animal:

This subclass is indented under subclass 266. Apparatus in which the drive for the drum includes structure its drive source.

382 Including static receiver spaced from drum for storing pulled cable:

This subclass is indented under subclass 266. Apparatus including a static structure, (e.g., receptacle, shelf, hook) spaced a distance from the perimeter of the drum for receiving or holding segments of the cable which have been contacted and pulled by the drum.

SEE OR SEARCH CLASS:

19, Textiles: Fiber Preparation, subclass 159 for methods of and means for coiling or otherwise packing slivers, rovings, or the like into storage receptacles.

383 With cable guard structure extending partly around and closely adjacent to drum:

This subclass is indented under subclass 266. Apparatus in which the drum is at least partially surrounded by structure located closely adjacent to its perimeter, the structure preventing the cable from moving any significant distance from the cable contacting portion of the drum's perimeter.

384 Including hand held and operated lever with plural cable engaging means movably attached thereto for alternately contacting and pulling on cable:

This subclass is indented under subclass 264. Apparatus wherein the device includes a hand held and powered lever which is reciprocated about a pivot point and is provided with plural cable engaging means movably attached thereto and shifting therewith during pivoting, and further wherein each means alternately contacts the cable and sequentially (a) engages the cable while the other means releases it, (b) pulls on the cable as it is shifted in one direction by the lever, and (c) releases the cable when the other means engages and begins to pull on the cable.

(1) Note. The engaging means is not directly placed into or removed from the operator during the above sequence.

SEE OR SEARCH THIS CLASS, SUBCLASS:

254, and 259, for an implement or apparatus for tensioning flexible material or extracting stumps or poles which includes a hand held lever with plural engaging or clamping means movably attached thereto for alternately contacting and pulling on the flexible material or a cable attached to the flexible material, stump or pole.

385 With rotatable, cable contacting, pulley wheel element attached to and reciprocated by driving component of device:

This subclass is indented under subclass 264. Apparatus wherein the portion of the device which contacts the cable includes at least one element having a generally circular perimeter and rotating about an axis through its center in response to the movement of the cable over its perimeter, the element is attached to a driving component of the device which reciprocates it from one position to another to apply a pulling force on the cable when the object is transported or shifted.

SEE OR SEARCH CLASS:

187, Elevator, Industrial Lift Truck, or Stationary Lift for Vehicle, subclasses 252+ for an elevator car shifted between floors by a cable having a segment passing around a sheave which has its rotational axis reciprocatingly moved by drive means.

386 Element reciprocated by expansible fluid motor:

This subclass is indented under subclass 385. Apparatus wherein the driving component of the device includes a telescopic, fluid powered mechanism.

SEE OR SEARCH THIS CLASS, SUBCLASS:

93+, for implements actuated by fluid pressure.

387 LOAD ENGAGING MEMBER AND POWER TRANSMITTING CABLE FOR SHIFTING MEMBER RELATIVE TO STRUCTURE WHICH CONTACTS AND GUIDES MEMBER:

This subclass is indented under the class definition. Apparatus provided with a member for engaging the object when a pushing or pulling force is applied through the member to the load, and a cable for transmitting force from a power source to the member to move the member from one position to another, and further wherein the apparatus is also provided with guiding structure which continuously contacts at least a portion of the member and restricts it to a fixed path of travel when the member is moved relative to the structure by the cable.

SEE OR SEARCH CLASS:

52, Static Structures (e.g., Buildings), appropriate subclasses for mast or tower structures, per se, particularly subclasses 111+ for a mechanism extensible or movable shaft; and subclasses 651.05+ for three-dimensional openwork.

388 MEANS SUPPORTED BY, AND MAINTAINING RELATIVE SPACING BETWEEN, LONGITUDINAL RUNS OF AN ENDLESS LOAD MOVING CABLE:

This subclass is indented under the class definition. Implements or apparatus comprising means completely supported by an object moving, endless cable, the means contacting each of the longitudinally extending segments of the cable and maintaining the relative distance therebetween.

SEE OR SEARCH CLASS:

174, Electricity: Conductors and Insulators, subclass 41 for messenger cable supported electric conductors, cables, and conduits; and subclass 160 for strand supported insulators.

191, Electricity: Transmission to Vehicles, subclasses 40+ for trolley line supports.

248, Supports, subclass 61 for pipe or cable supports suspended from an overhead or messenger cable.

389 DEVICE OR MEMBER FOR CONTACTING AND GUIDING MOVING CABLE:

This subclass is indented under the class definition. Cable guides including a device or member which contacts a cable moving relative to it, and (a) regulates the course of the cable as it moves along its path of travel, or (b) changes the direction of a force transmitted through the cable to the object.

(1) Note. This subclass is the collecting point for a guide for a cable when the guide and cable are components of a mechanism which is similar in nature to an implement or apparatus of this class, (i.e., one which applies a tension-or pressure-exerting, pushing, or pulling force to an object, and wherein the object is (a) transported by the cable, or (b) separable from, rather than continuously attached to, the mechanism), provided that no other locus for the mechanism exists and no other components of the mechanism are claimed.

(2) Note. While the patents of this area frequently fail to claim the device or member in a manner whereby it is adapted, or otherwise restricted, to being used with an implement of this class or mechanism of a similar nature (see (1) Note of this subclass), such use is, nevertheless, the sole disclosed one.

(3) Note. Devices for guiding or directing cable to a haulage drum are found in Class 242 when there are features peculiar to how the cable is wound on the surface of the drum, (e.g., traversing guides).

SEE OR SEARCH CLASS:

15, Brushing, Scrubbing, and General Cleaning, subclass 246 for strand guides combined with strand cleaners.

16, Miscellaneous Hardware, subclasses 210+ for sash-cord guides; subclasses 194 and 219 for sash-cord counterweights with cord guiding structure; and subclasses 404+ for counter-

weights intended to be used with doors or gates and having cord guiding structure.

24, Buckles, Buttons, Clasps, etc., subclasses 115+ for cable gripping or holding structure when no specific cable guiding structure is claimed.

43, Fishing, Trapping, and Vermin Destroying, subclass 24 for line guides for fishing rods.

54, Harness for Working Animal, subclass 73.

104, Railways, subclasses 165+ for cable guides limited to use in railway propulsion.

114, Ships, subclasses 179+ for hawse pipes; and subclass 101 for guides especially designed for use on spars and rigging.

116, Signals and Indicators, subclasses 173+ for flagstaffs.

211, Supports: Racks, subclasses 119.01+ for arrangements of cable used as clotheslines.

226, Advancing Material of Indeterminate Length, may include a nominal recitation of a supply or take-up coil (e.g., less than a support for such a coil or a cooperative relationship between a tension or exhaust detector and reel driving or reel stopping means, etc.), subclass 196.1 for a passive guide combined with a material feeder.

242, Winding, Tensioning, or Guiding, subclasses 273+ for a guide in a fishing reel, subclass 377 for a guide in a spring powered reel, subclasses 397+ for a guide in a reeling device of general use, subclasses 548+ for a guide in a winding machine, subclass 566 for a guide in an unwinding machine, and subclasses 615+ for a guide for running material.

343, Communications: Radio Wave Antennas, subclass 707 for antennas with aircraft of the traveling type and which may include fair-lead structure.

390 Including rotatable, cable contacting, pulley wheel element:

This subclass is indented under subclass 389. Cable guides wherein the portion of the device which contacts the cable includes an element having a generally circular, continuous perimeter and rotating about an axis, fixed relative to another portion of the device and passing through the center of the element, in response to the movement of the cable over its perimeter.

(1) Note. The pulley wheel element is not intended to be driven around its rotational axis by any external drive source or drive train, (e.g., motor, gear wheel, spring, etc.), nor is its rotational movement ever utilized to drive other elements of a drive train, (e.g., hand wheel and cable drives, sprocket and chain drives, etc.). The force needed to rotate it about its axis being derived solely from its contact with the shifting cable and the purpose of the rotation being to reduce the frictional resistance of the guide to the cable's movement.

(2) Note. The cable which contacts the pulley wheel element is not affixed or attached to the element in any manner.

SEE OR SEARCH CLASS:

248, Supports, subclass 331 for a vertically adjustable support suspended from a cord having a counter-weight attached thereto; and subclass 332 for a pulley bracket for guiding a cord from which a vertically adjustable support is suspended.

391 With mechanism for retarding or preventing cable movement or element rotation:

This subclass is indented under subclass 390. Cable guides in which the device is provided with a mechanism for slowing or stopping the movement of the cable along its path of travel or the rotation of the element, in at least one direction, about its axis of rotation.

SEE OR SEARCH CLASS:

160, Flexible or Portable Closure, Partition, or Panel, subclasses 257+ for a flexible panel having strand type operating means and position holding means.

188, Brakes, subclass 64 for brakes which operate on a strand and a wheel or pulley over which it runs; and subclasses 65.1+ for brakes which operate on a strand.

392 With fluid, shock absorbing or tension restoring mechanism connected thereto:
This subclass is indented under subclass 390. Cable guides in which the device is provided with a fluid mechanism attached to the element for either (a) retarding changes in the position or attitude of the element resulting from variations in the amount of tension on the cable, or (b) restoring the element to a position or attitude in close proximity to its initial location or orientation subsequent to a change in its position or attitude as in (a) above.

393 Plural elements or element with plural cable contacting regions:
This subclass is indented under subclass 390. Cable guides in which the device includes two or more rotatable, cable contacting elements, or a single element which has two or more distinct and defined, cable contacting regions.

394 At least two of the elements having noncollinear axes of rotation:
This subclass is indented under subclass 393. Cable guides in which two or more of the elements have axes of rotation which do not form segments of the same straight line.

395 Juxtaposed to cable at single locus:
This subclass is indented under subclass 394. Cable guides wherein at least two of the elements have their perimeters closely clustered around a single point and either (a) simultaneously come into contact with the same segment of cable, or (b) each one intermittently contacts a segment of the cable passing through the point.

396 Having juxtaposed elements repositionable relative to one another:
This subclass is indented under subclass 395. Cable guides in which the position of one of the elements of the cluster may be altered.

397 Including additional element spaced along cable path:
This subclass is indented under subclass 395. Cable guides in which there is at least one additional element located along the path of the cable for contacting the cable at another point.

398 Having one element repositionable relative to another element:
This subclass is indented under subclass 394. Cable guides wherein the position of one of the elements is changeable in relationship to another element.

(1) Note. The element which changes its position is useable in at least two of its attitudes or locations.

399 Repositionable element supported by cable, (e.g., traveling block):
This subclass is indented under subclass 398. Cable guides wherein the element which changes its position is supported on and travels with the cable, the cable having its course partially determined by this element.

400 Having axes perpendicular or skewed:
This subclass is indented under subclass 394. Cable guides wherein at least two of the elements have axes of rotation which are at a right angle or an oblique angle to each other.

401 With portable block for elements and hand-manipulated means for removably fastening block to support base or load:
This subclass is indented under subclass 393. Cable guides provided with a movable housing for partially encasing or enclosing two or more of the elements and wherein the housing has hand-manipulated means located thereon to detachably fasten it to a supporting base, (e.g., static structure) or a load.

(1) Note. The fastening means of this subclass is capable of relatively easy and quick detachment from the load or the supporting base by manual force without the assistance of tools.

402 Having portion of block repositionable for insertion or removal of cable or for exposure of elements:
This subclass is indented under subclass 401. Cable guides wherein a component of the housing, or fastening means, is movable for either (a) facilitating the placement of the cable on, or its displacement from, one of the elements, or (b) exposing a region of the element's cable contacting perimeter, which region is otherwise

concealed when the elements are in a particular rotational position.

403 With guard or guide for maintaining cable on elements:
This subclass is indented under subclass 401. Cable guides in which the housing is provided with a member having the principal, and usually sole, function of holding the cable on, or conducting it toward or away from, at least one of the elements.

404 This subclass is indented under subclass 401. Including antifriction means for elements: Cable guides in which the portion of the housing contacting the elements near their axes of rotation includes friction diminishing means, (e.g., bearings, provision for lubrication) for enhancing the capability of one or more of the elements to rotate by reducing the frictional resistance thereto.

SEE OR SEARCH CLASS:
184, Lubrication, appropriate subclasses for devices employed to lubricate bearing parts in a machine.
384, Bearings, subclasses 445+ for anti-friction bearings.

405 With block for element and portion thereof repositionable for insertion or removal of cable or for exposure of element:
This subclass is indented under subclass 390. Cable guides provided with a housing for partially encasing or enclosing the element and wherein the housing has a component which is movable for either (a) enabling the placement of the cable on, or its displacement from, the element, or (b) exposing a region of the element's cable contacting perimeter, which region is otherwise concealed when the element is in a particular rotational position.

406 Portion revolves about axis of rotation of element:
This subclass is indented under subclass 405. Cable guides in which the movable component turns around an axis collinear with the axis of rotation of the element.

407 With means, or element structure, enabling object or obstruction on cable to bypass or travel over element:
This subclass is indented under subclass 390. Cable guides in which either (a) the device include means allowing objects attached to, or obstructions on, the cable to circumvent the element's cable contacting perimeter, or (b) the element's perimeter is constructed to facilitate the travel of such objects or obstructions over it.

(1) Note. This subclass does not include elements which have a continuous, cable contacting perimeter with a constant cross section, and allow only objects which are specially constructed to conform to the element's cross-sectional shape to travel over them.

408 With block for element having stationary portion adapted to coact with element to grip cable:
This subclass is indented under subclass 390. Cable guides provided with a housing for partially encasing or enclosing the element and wherein the housing has a portion which is fixed relative to the remainder of the housing and is specially adapted to cooperate with the element to wedge the cable therebetween when it is desired to retain the cable at a particular position.

409 With portable block for element and hand manipulated means for removably fastening block to support or load:
This subclass is indented under subclass 390. Cable guides provided with a movable housing for partially encasing or enclosing the element and wherein the housing has hand-manipulated means located thereon for detachably fastening it to a supporting base or to a load when the element is in use.

(1) Note. The fastening means of this subclass is capable of relatively easy and quick detachment from the load or the supporting base by manual force without the assistance of tools.

410 Fastening means remotely operable or breakaway type:

This subclass is indented under subclass 409. Cable guides in which the fastening means has structure which particularly adapts it to be operated (1) by an attendant who is located at a distance from the means which is greater than his normal, unassisted reach, or (2) by a sudden change in (a) the forces acting on, or (b) the position of, the load.

SEE OR SEARCH CLASS:

114, Ships, subclasses 378+ for readily detachable connections for releasing lifeboats from handling structure.

294, Handling: Hand and Hoist-Line Implements, subclasses 82.24+ for hooks having some special adaptation for detachment from the load.

411 With guard or guide for maintaining cable on element:

This subclass is indented under subclass 409. Cable guides in which the housing is provided with a member having the principal, and usually sole, function of holding the cable on, or conducting it toward or away from, the element.

412 Including antifriction means for element:

This subclass is indented under subclass 409. Cable guides in which the portion of the housing contacting the element near its axis of rotation includes friction diminishing means, (e.g., bearings, provision for lubrication) for enhancing the capability of the element to rotate by reducing the frictional resistance thereto.

SEE OR SEARCH CLASS:

184, Lubrication, appropriate subclasses for devices employed to lubricate bearing parts in a machine.

384, Bearings, subclasses 455+ for anti-friction bearings.

413 With means for affixing element to support base and allowing relative movement therebetween:

This subclass is indented under subclass 390. Cable guides in which the element is joined to a supporting base by means which allows the element's axis of rotation to shift or change its attitude relative to the juncture of the base and the means.

414 Including elastic member:

This subclass is indented under subclass 413. Cable guides wherein the means includes at least one elastic member exerting a force on the element, which force tends to maintain the element in its original location relative to the base.

415 Including pivotal, rotational, or swivel connection:

This subclass is indented under subclass 413. Cable guides wherein the means includes a connection which allows the element's axis of rotation to be pivoted, rotated, or swiveled about the juncture of the base and the means.

416 With antifriction means for element:

This subclass is indented under subclass 390. Cable guides in which friction diminishing means, (e.g., bearings, provision for lubrications) is provided between the element and the structure which support it for enhancing the capability of the element to rotate about its axis by reducing the frictional resistance thereto.

SEE OR SEARCH CLASS:

184, Lubrication, appropriate subclasses for devices employed to lubricate bearing parts in a machine.

384, Bearings, subclasses 455+ for anti-friction bearings.

417 Having cable contacting portion revolving around another component of device:

This subclass is indented under subclass 389. Cable guides wherein the portion of the device which contacts the cable (e.g., an endless belt, plural abutting balls or rollers in a race, plural interconnected arms) revolves around another component of the device in response to the movement of the cable over its surface.

418 Vehicle attached jack:

This subclass is indented under the class definition. Device wherein a vehicle lifting jack is secured to a vehicle as part thereof, for the purpose of lifting the vehicle, or a part thereof, off of the surface on which the vehicle is supported.

(1) Note. For the purposes of this subclass, an attached vehicle jack is activated for

purposes of repair to the vehicle or to position the vehicle relative to something else, e.g., positioning a semi-trailer relative to a tractor for coupling to or uncoupling from the tractor.

SEE OR SEARCH CLASS:

280, Land Vehicles, subclasses 6.15+ for a vehicle including (a) means, interposed between the vehicle body, chassis, or frame and running gear thereof, for altering height or levelness of the vehicle body, chassis, or frame; or (b) an attached retractable prop, stand, or support which is interrelated to the interposed means; or subclasses 763.1+ for a retractable prop, stand, or support attachment for a general utility wheeled land vehicle whose proximate utility is to stabilize the vehicle in a stationary position, even though the retractable prop, stand, or support may actually raise the vehicle wheels off of the traveling surface.

293, Vehicle Fenders, subclasses 111.1+ for the combination of a jack and a vehicle bumper.

419 Semi-trailer landing gear:
This subclass is indented under subclass 418. Device wherein the jack supports the front end of a semi-trailer after the semi-trailer has been detached from the tractor.

420 Attached to trailer tongue:
This subclass is indented under subclass 418. Device wherein the jack is attached to the tongue or draw-bar of a trailer for supporting the front end of the trailer after it has been detached from the towing vehicle.

421 Turntable:
This subclass is indented under subclass 418. Device wherein the jack lifts the vehicle completely off of the vehicle supporting surface and allows the vehicle to be rotated about a vehicle axis.

422 Rocking lever:
This subclass is indented under subclass 418. Device wherein a rigid vehicle supporting element pivots about a generally horizontal axis into engagement with the vehicle supporting surface, and then continues the pivotal movement due to the forward or rearward movement of the vehicle, thereby lifting the vehicle or part thereof off of the vehicle supporting surface.

423 Hydraulic or pneumatic:
This subclass is indented under subclass 418. Device wherein the jack is actuated by means of fluid pressure.

424 Screw actuated:
This subclass is indented under subclass 418. Device wherein the jack is actuated by the rotation of a screw threaded rod.

425 Gear driven:
This subclass is indented under subclass 424. Device wherein the screw threaded rod is caused to rotate by means of a gear.

426 Cable actuated:
This subclass is indented under subclass 418. Device wherein tension exerted on a cable activates the vehicle jack.

427 Rack and pinion:
This subclass is indented under subclass 418. Device wherein the reaction caused by the interaction of a relatively small circular gear (pinion), and an elongate bar gear (rack), causes the jack to actuate.

CROSS-REFERENCE ART COLLECTIONS

900 CABLE PULLING DRUM HAVING WAVE MOTION RESPONSIVE ACTUATOR FOR OPERATING DRIVE OR ROTATION RETARDING MEANS:
Apparatus for pulling on a load hauling cable including a drum either mounted on a floating structure or attached to a floating load, and an actuator responsive to the motion of the fluid on which the structure or load floats for either operating (a) a drive for the drum, or (b) means which retards the rotation of the drum.

901 ANTIFRICTION MEANS FOR CABLE PULLING DRUM:
Apparatus under pulling haulage cable in which friction diminishing means, (e.g., bearing, provision for lubrication) is provided between a cable pulling drum and the structure which supports it for enhancing the capability

of the drum to rotate about its axis by reducing the frictional resistance thereto.

902 EITHER DRUM, PULLEY WHEEL ELEMENT OR CABLE CONSTRUCTED FROM SPECIFIC MATERIAL:
Apparatus for pulling haulage cable including either a drum, a pulley wheel element or a cable which is constructed from a specific material.

903 YIELDABLE, CONSTANT ENGAGEMENT, FRICTION COUPLING, (E.G., SLIP CLUTCH) IN DRIVE FOR CABLE PULLING DRUM:
Apparatus for pulling on a load hauling cable including a driven drum, the drive for the drum includes a coupling having at least two members which rotate around a common rotational axis and have a surface in constant contact with that of the other cooperating member, the members normally rotate together at the same rotational speed when transmitting power to the drum due to the friction created by the contact of their surfaces, however, if the torque on one of the members exceeds an acceptable amount, or the amount of force tending to push the contact surfaces of the members toward each other is reduced, the contact surfaces will slip relative to each other.

END